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WORCESTER COUNTY
HORTICULTURE SOCIETY

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TRANSACTIONS

OF THE

WORCESTER COUNTY

HORTICULTURAL SOCIETY

REPORTS OF THE OFFICERS

FOR THE YEAR ENDING NOVEMBER 1, 1912
AND THE ANNUAL MEETING HELD NOV. 6th, 1912

Worcester, Mass.
THE COMMONWEALTH PRESS
50 Foster Street
1912

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OFFICERS AND COMMITTEES

OF THE

WORCESTER COUNTY HORTICULTURAL SOCIETY

For the Year

1911-1912

PRESIDENT:

EDWARD W. BREED, of Clinton.

VICE-PRESIDENTS:

ARTHUR J. MARBLE, of Worcester; CHARLES GREENWOOD, of Worcester;
HERBERT R. KINNEY, of Worcester.

SECRETARY:

LEONARD C. MIDGLEY. of Westboro.
Horticultural Hall, 18 Front St.

LIBRARIAN:

LUCY M. COULSON, of Worcester.

TREASURER:

BURT W. GREENWOOD, of Worcester.

TRUSTEES:

Joseph A. Allen,	Auburn	Simon E. Fisher,	Worcester
David L. Fiske,	Grafton	Mrs. Percy G. Forbes,	"
Henry B. Watts,	Leicester	George E. Francis, M. D.	"
Edgar M. Bruce,	Leominster	Joseph K. Greene,	"
Henry W. Carter,	Millbury	Ben. M. Chamberlain,	"
Herbert A. Cook,	Shrewsbury	Louis J. Kendall,	"
Mrs. J. Frank Record,	West Boylston	Frank J. Kinney,	"
William McAllister,	Whitinsville	H. Ward Moore,	"
George McWilliam,	"	Burton W. Potter,	"
Fred'k H. Chamberlain,	Worcester	Alden Rice,	"
Mrs. Olive G. Davidson,	"	Howard E. Sumner,	"
Walter D. Ross,	"	William J. Wheeler,	"
James E. Draper,	"	Albert H. Lange,	"
J. Lewis Ellsworth,	"	George Calvin Rice,	"
Allyne W. Hixon,	"	Charles W. Wood,	"

STANDING COMMITTEES.

ON FINANCE:

Arthur E. Hartshorn, 1914, *Chairman*, Leonard C. Midgley, 1915, Myron F. Converse, 1913.

ON LIBRARY AND PUBLICATIONS:

George E. Francis, M. D., *Chairman*, Arthur J. Marble, Edward W. Breed.

ON NOMENCLATURE:

Herbert A. Cook, Charles Greenwood, Henry E. Kinney, Herbert R. Kinney,
Albert H. Lange, Arthur J. Marble, George McWilliam, George Calvin Rice.

ON ARRANGEMENTS AND EXHIBITIONS:

Herbert R. Kinney, *Chairman*, Simon E. Fisher, Arthur E. Hartshorn,
Arthur J. Marble, William J. Wheeler, Albert H. Lange.
H. Ward Moore, The President and Secretary.

AUDITORS.

Benjamin C. Jaques, H. Ward Moore.

JUDGES.

OF FLOWERS, PLANTS, ETC.: George McWilliam,
OF FRUITS, ETC.: Herbert A. Cook,
OF VEGETABLES: Charles Greenwood.

MEDAL COMMITTEE.

Albert H. Lange, Herbert A. Cook, President E. W. Breed.

ON WINTER MEETINGS.

Arthur J. Marble, *Chairman*, Walter D. Ross, Joseph K. Greene,
The President and Secretary.

WORCESTER COUNTY

HORTICULTURAL SOCIETY

FOR THE YEAR ENDING NOVEMBER 1, 1912, AND THE ANNUAL MEETING FOR 1913.

PRESIDENT'S REPORT

We meet again to give an account of the work done during the past year and to plan for the future.

The reports you have heard show what has been accomplished and the society has much to be thankful for.

Our various departments have all been active and the members of the different committees have endeavored to perform their work faithfully.

The exhibitions during the past season have been much better than last year, due in no small degree to the more favorable weather conditions.

The number of persons exhibiting flowers has greatly increased, as the statistics which the secretary has given clearly show. This would seem to warrant a larger proportion of premiums in that department another year, for our aim should be to encourage the exhibitors in their efforts to make our shows as attractive as possible.

During the past few years we have tried to have special exhibitions in which some one fruit or flower was made the feature of that day. This feature I think we should develop still more, and I would suggest that besides our strawberry exhibition we should have one devoted to peaches, one to grapes and one to apples in their respective seasons.

Among the flowers, the following should each have a similar recognition, spring flowers, peonies, roses, sweet peas, gladioli, asters, dahlias.

The display of assorted vegetables might be made on a larger scale, possibly a corn show could be added. These suggestions I refer to the committee on exhibitions.

I would ask the exhibitors to study the schedule more closely, to plan for the stated prizes of the day, and in the case of flowers, to specialize more, to master a few varieties before they attempt a greater number.

It is the quality and high standard that makes our exhibitions worth while.

The decision of the trustees, to use the interest of the Hadwen fund to procure medals to be awarded meritorious exhibitions showing superior cultivation, was a wise action and one which should stimulate an interest in producing the very best quality of exhibits.

Our building is in fine order owing to the efficient services of our finance committee who have been untiring in their efforts to keep it in good shape. The increasing value of our property has been demonstrated by outside parties desiring to have us set a price upon it, but, it is well adapted to our needs, constantly increasing in value, and a most desirable investment.

The library is in excellent condition, new works being added as they prove to be of value.

The winter meetings embraced a wide range of subjects and were well attended. The illustrated ones being of unusual interest.

On May 20th, members of the society to the sumber of sixty were the recipients of an invitation from Mr. and Mrs. Bayard Thayer to visit their beautiful estate at Lancaster during the time that the spring flowers were in bloom. The generous hospitality shown by the Thayer family and the beautiful sights seen will ever be remembered by those present.

Later in the season Mr. and Mrs. H. R. Kinney extended an invitation to the members to spend an afternoon with them at their home, which also afforded much pleasure.

The membership remains the same, the new members added equal the ones who have passed away. The present enrollment being 632.

During the past year we have lost a member who for many years held various offices in this society. In his interest he followed in the footsteps of his father who was our second president—I refer to the late Hon. Edward L. Davis, a gentleman held in high esteem, who had occupied positions of honor in church and city, a trustee at the time of his death. It is a matter of regret that this family name which has always been associated with the society should be no longer on the roll.

Mr. George Cruikshanks, for many years an officer and exhibitor, a man who devoted his life work to horticulture, is also among the list of those who have passed on.

It is again my pleasnt duty to thank you all for the part you have taken in the work of the past year, for the kindness you have shown me and for the success which I believe has been achieved.

EDWARD W. BREED.

REPORT OF THE SECRETARY

The first meeting of the Trustees held after the Annual Meeting of Society on November 1, 1911. Number of Trustees present, nineteen.

The following committees were elected:

On Library and Publication: Dr. George E. Francis, Chairman, Arthur J. Marble, President Edward W. Breed, Secretary Leonard C. Midgley.

On Nomenclature: Herbert A. Cook, Albert H. Lange, Charles Greenwood, Arthur J. Marble, Henry E. Kinney, George McWilliam, Herbert R. Kinney, George Calvin Rice.

On Arrangement and Exhibitions: Herbert R. Kinney, Chairman, Simon E. Fisher, Arthur E. Hartshorn, W. J. Wheeler, H. Ward Moore, Albert H. Lange, Arthur J. Marble, with president and secretary.

Auditors: H. Ward Moore, Benjamin C. Jaques.

Judges: George McWilliams, Flowers; Herbert A. Cook, Fruit; Charles Greenwood, Vegetables.

Medal Committee, appointed by the President: Albert H. Lange, Herbert A. Cook, President Edward W. Breed.

Committee on Winter Meetings: Arthur J. Marble, Chairman, F. H. Chamberlain, Chas. W. Wood, with President and Secretary.

APPROPRIATIONS

Flowers	$1,000.00
Fruit	1,000.00
Vegetables	650.00
Winter Meetings	300.00
Publications	300.00
Children's Show	100.00

Arthur E. Hartshorn recommended that the salaries be the same for officers as last year:

Secretary	400.00
Librarian	500.00
Treasurer	150.00
Janitor	800.00

It was voted that a committee be appointed to draw up resolutions upon the death of our former Secretary, Adin A. Hixon.

COMMITTEE

President Edward W. Breed, Charles Greenwood, Leonard C. Midgley.

The Trustees also voted to allow Charles H. White, Field Agent for Worcester County, desk room in its library.

November 23, 1911, Meeting of the Library Committee.

It was voted that the Chairman, Dr. George E. Francis, with the Librarian, Lucy M. Coulson, arrange for the overflow of books.

Also voted that the Secretary see Woodbury and Carlton, Engravers, about a new certificate for membership.

The committee on Winter Meetings voted Arthur J. Marble Chairman, no other business at this meeting.

DECEMBER 7, 1911

The Committee on arrangement met and voted H. R. Kinney its Chairman. Seven of the Committee present.

The Committee voted to have the April 6th show held in conjunction with the March show.

They also voted to bring up the question of medals from the Hadwen fund to the Trustees.

MEMORANDUM ON WINTER MEETINGS

A full report can be found of these meetings in their respective places.

THURSDAY, Jan. 11th. The Tree Warden's Opportunity, by Mr. Irving T. Guild, Ex. Sec'y, Massachusetts Forestry Association.

THURSDAY, Jan. 18th, 1912. New England Agriculture as shown at the American Land Show in New York, Mr. J. Lewis Ellsworth.

THURSDAY, Jan. 25th. Illustrated Lecture. Haunts of Nature, Edward F. Bigelow, A. M., Ph. D., Arcadia, Conn.

THURSDAY, Feb. 1st. Lecture. Agricultural Development in Worcester County, Mr. Chas. H. White, Agricultural Field Agent.

THURSDAY, Feb. 8th. Ladies' Day. Holland, Illustrated, Mrs. Mina Eliot Tenny Peck, Boston, Mass.

SATURDAY, Feb. 10th. Children's Day. Mrs. Percy G. Forbes, Mrs. Scott Pierce and Miss Ida Henderson, Committee.

THURSDAY, Feb. 15th. The Wanderings of a Plant Collector in Western China, Illustrated, E. H. Wilson, Arnold Arboretum.

THURSDAY, Feb. 29th. Lecture, Illustrated. Where seeds come from, Mr. John Farquhar, Boston, Mass.

THURSDAY, March 6th. Massachusetts Fruit Growers Association, Professor Pickett, Agricultural College, Durham, N. H.

MARCH 7, 1912

The Society held one of the best shows ever held on March 7th.

The special feature was the display of Amaryllis Seedlings grown by William Anderson, gardener for Bayard Thayer, South Lancaster, he was awarded one of the Blake Medals for his collection.

Another fine feature was the display of potted plants by Albert H. Lange.

A seedling carnation grown by Leonard C. Midgley named Eureka was also given the Blake medal.

There was a good showing of vegetables at this time.

George McWilliam exhibited a new Orchid Calanthe Laselliana.

Wednesday, March 13, 1912

Annual Reunion and Banquet

The usual reception was held in the hall, from 5.30 to 6.30, by President and Mrs. Edward W. Breed, Secretary and Mrs. Leonard C. Midgley, Mr. and Mrs. Arthur J. Marble, Mr. and Mrs. Charles Greenwood, Mr. and Mrs. Arthur E. Hartshorn, Mrs. Percy G. Forbes, Mrs. Scott F. Pierce; Miss Lucy M. Coulson, Mr. and Mrs. Herbert R. Kinney, Burt W. Greenwood, Myron F. Converse, J. Lewis Ellsworth, and Joseph K. Greene. Over three hundred guests were present.

After the reception, dinner was served in the dining hall, which was decorated with flags, and with flowers furnished by Mr. Midgley. Divine blessing was asked by the Rev. Mr. Taylor. Following the dinner was a short programme of after-dinner speech-making. President Breed made a short address, which was, in part, as follows:

"It gives me pleasure to greet the members and guests of the society, and welcome you all to our annual banquet, which has, this year, a special significance. This reunion brings us to the threescore and tenth anniversary, and we seem to have strengthened, instead of abated, as we have grown older. It looks as though we were ready, not only for the fourscore, but many more.

"Birthday anniversaries are looked forward to with pleasure, until a certain date. Instead of saying that we are seventy years old to-day, we might say that we are thirty-five for the second time. We celebrate another birthday to-day: that of our winter meetings, which commenced thirty-five years ago, and we hope they will continue to be the important factors in our work, that they have been in the past.

"As we look back to the first exhibits, we find that they consisted chiefly of apples and pears in a limited number. Squash was the principal vegetable; dahlia, the principal flower exhibited in those days. Those early exhibitors, however, had a great love for horticulture, and their exhibits were made more

for the love and interest, than for premiums, for none were offered.

"It seemed to be their chief ambition to have a great number of varieties, and this must have been trying for the judges."

Mr. Breed then spoke of the horticultural exhibition, to be held in London in May, and to the National Sweet Pea exhibit to be held in Boston, July 13 and 14. $5,000 has been offered for awards. The Worcester County Horticultural Society is affiliated with the Royal Horticultural Society of Great Britain.

Mr. Breed then called on Henry B. Watts, of Leicester, who recalled to memory the celebration of the fiftieth reunion, held twenty years ago.

Arthur J. Marble, Chairman of the Winter Meetings Committee, and also of the General Committee of Arrangements, was then called upon. Mr. Marble said that, of the seven officers on that occasion, only one remained, Dr. G. E. Francis. Mr. Marble also referred to a sub-committee of that time, and said that but four remained, two of them in ill health, and the other two, including himself, were present.

A letter from Dr. Francis, in which he said that he regretted the illness that prevented his attending the reunion, and extended greetings to the society and members, was read by President Breed. Mr. Marble made the motion that letter of greeting be written in behalf of the society, by the secretary, and sent to Dr. Francis.

A letter of regret from Ex-Mayor Harrington was also read by the President. A previous engagement prevented his attendance of the reunion.

J. Lewis Ellsworth was then called upon and he spoke of the early days of the society.

"The history of this society is very interesting. It has done a splendid work all along, and we can look back on what has been done, with pleasure.

"In spite of all this talk of the high cost of living, if you New England farmers will keep on growing the best possible products, you will always find a good market for them.

"The apples of New England," he said, "are what the people want. They are of a better quality, and have a better flavor than the others, and they will improve if some of the methods of the West are adopted in their production.

"Massachusetts is the best place in which to live, and next to that, I will always add—Worcester. We have the best roads. Massachusetts was the pioneer of good roads. Other states are spending millions of dollars trying to keep up with us, in that respect. We have the best schools, the best agricultural college. At present, there is a farmers' week being held in Amherst, with some seven hundred people in attendance at the present time. This will, no doubt, be of great benefit to the farmers."

Harold L. Frost, Arlington, elected President of Massachusetts Fruit Growers Association, was the next speaker. In behalf of the Massachusetts Fruit Growers Association, he thanked the Horticultural Society for the many courtesies extended his association, and also for fostering it.

Harry W. Smith, of Grafton, called to the minds of those present, the early presidents of the society. Presidents Hadwen, Davis, Earle, Salisbury, and Lincoln, all were subject to humorous remarks from Mr. Smith. He spoke of President Bullock, whose yard was planted with a number of fine trees, which he (Mr. Smith) was fond of climbing; and of President Burnside, whose back yard was planted with strawberries, the best of which he never got. Mr. Smith recalled with pleasure the fact that, in that alcove of what is now the dining hall, he received his first blue ribbon for tumbler pigeons. He said he always advocated the idea of giving blue riboons.

Prof. B. S. Pickett, of Durham, N. H., brought greetings from that state. He said that out West, where he originally came from, there were two Eastern societies which were looked up to with much interest and respect: they are the Worcester County Horticultural Society, and the Massachusetts Society.

Wilfred Wheeler, of Concord, extended hearty greetings and congratulations to the society from the Massachusetts Society;

and also wished the Worcester society the greatest success in their every undertaking.

The speech-making was interspersed by the singing of the Verdi quartette.

The Light Infantry orchestra played classic and popular music during the reception and for the dancing which followed the dinner. The dance programme was opened by the Grand March, led by President and Mrs. Edward W. Breed. The programme was made up of the Waltz, Two-step, and Schottische for the young people, with the Lancers, Virginia Reel, and Portland Fancy for the older people.

At the guest table were: Mr. and Mrs. McWilliam, of Whitinsville; Mr. and Mrs. Herbert R. Kinney, Mr. and Mrs. Charles Greenwood; Prof. B. S. Pickett, Durham, N. H.; Harold L. Frost, Arlington; Chief Justice and Mrs. Arthur P. Rugg, President and Mrs. Edward W. Breed; Harry W. Smith, Grafton; Rev. William J. Taylor, J. Lewis Ellsworth, Boston; Joseph K. Greene, Secretary and Mrs, Leonard C. Midgley, Gen. Charles C. Wood, Mr. and Mrs. Arthur J. Marble, Mrs. William S. Flint; J. B. Castner, Hood River, Ore; Miss Lucy M. Coulson, Mr. and Mrs. W. E. Putnam, Mr. and Mrs. Arthur E. Hartshorn, Myron F. Converse, G. N. Laird; Wilfred Wheeler, Concord; Charles H. White, Northboro; Miss May E. Robbins, Miss Elizabeth R. Clark, George Calvin Rice; John W. Clark, Medway; Arthur H. Bellows, Burt W. Greenwood; Mr. and Mrs. Henry B. Watts, Leicester.

May 2, 1912

Trustees meeting. Fourteen present. The call for this meeting was to consider what should be done relative to the Hadwen Fund.

Secretary read the following which he received from Court House.

Excerpt from the will of Obadiah B. Hadwen.

"First I give and bequeath to the Worcester County Horticultural Society the sum of one thousand dollars to be safely

invested to be known as the Hadwen Fund, the annual income to be used as the Society may authorize or direct."

President Breed asked the Trustees what they would do. After the question had been fully discussed it was voted to give medals for meritorious exhibits on flowers, fruit and vegetables.

Medals not to cost more than fifteen dollars. It was not decided at this meeting who should be the committee to make these awards.

June 22, 1912

The members of the Society were invited to visit the Farm of Herbert R. Kinney; about forty members were present to view the vegetable gardens, which were considered very fine for the season.

Tomatoes in the Greenhouses was a special feature.

Refreshments were served on the lawn by Mrs. Herbert R. Kinney. The day was enjoyed by all who attended.

A vote of thanks was given to Mr. and Mrs. Kinney for their fine entertainment.

August 8, 1912

Trustees' Meeting

Sixteen members present. The call for this meeting was to see if the Trustees would approve of the Finance Committee renting the Hall for Moving Pictures on each Saturday. The question was discussed quite freely by A. E. Hartshorn, H. R. Kinney, Charles Greenwood, Burton Potter, Arthur J. Marble and Myron F. Converse. Mr. Potter made a motion that the Finance Committee rent the Hall, this was seconded, and so voted.

It was voted at this meeting that the Blake Medal Committee be the same committee for the Hadwen medals.

Also voted that a Silver Medal be given William Simm, of Cliftondale, Mass., for his very fine exhibit of one hundred varieties of sweet peas

OCTOBER 10, 1912

At the Annual Dinner and Fall exhibit we had a great surprise in such a fine showing of fruit and flowers. President Breed spoke of the interest shown by the State and people in exhibitions of Horticulture and Agriculture. He spoke of the opportunities offered eastern Apple growers to exhibit the apples which are superior in flavor of any grown in the West.

George F. Morse, A. A. Shaw, Prof. F. W. Rane, all gave very interesting talks.

NOVEMBER 6, 1912

The Annual Meeting of the Worcester County Horticultural Society was held Wednesday, Nov. 6th, 1912, at 10 o'clock A. M. to act upon the following articles.

To hear the reports of Committees, to choose officers of the Society for the ensuing year, and other business that may legally come before the meeting.

The meeting was called to order by our President, Edward W. Breed, with thirty-six members present.

The reports from the following officers and committee were read and voted accepted.

Secretary, Leonard C. Midgley; Librarian, Lucy M. Coulson; Treasurer, Burt W. Greenwood; Arthur E. Hartshorn on Finance; Arthur J. Marble, on Winter Meetings; Herbert R. Kinney, Committee on Arrangements; Edward Breed, for Medal Committee; Geo. McWilliam, Judge on Flowers; Herbert A. Cook, Judge on Fruit; Charles Greenwood, Judge on Vegetables; and the President's Address.

The Society then proceeded to elect officers.

The Society voted the re-election of Edward W. Breed, President; Arthur J. Marble, Vice-President; Charles Greenwood, Vice-President; Herbert R. Kinney, Vice-President; Leonard C. Midgley, Secretary; Lucy M. Coulson, Librarian; Burt W. Greenwood, Treasurer.

Walter D. Ross, H. E. Sumner, Ben. M. Chamberlain were voted new Trustees.

Leonard C. Midgley was re-elected to serve on the Finance Committee for three years.

I have a few memorandums of this season's shows, which I thought would be of interest to its members.

I kept during the season a record of entries made at each show.

The total number of entries on Fruit being 490 and 375 awards given.

The total number of entries on Vegetables 520 and 425 awards given.

The total number on Flowers,720 entries and 490 awards given.

Over 400 entries being made where no awards were given; 230 on flowers, 115 on fruit, 95 on vegetables.

The flowers have taken up $859.00 of their appropriation and our chrysanthem show for to-morrow calls for $291.00, this will make our premium on flowers amount to $1,150.00.

On fruit we have used up $891.00, and to-morrow's show calls for $28.00, which will leave a balance of about $80.00.

The vegetables have a balance of $40.00.

We have had a very fine showing of flowers this season, our first show, in March, was large and we had quite a lot of specials during the summer such as Pæonias, Gladiolus. Sweet peas, and the Rose day was the largest in the history of the Society. I remember on one day the call for cut flowers brought out thirteen entries alone.

For my part I cannot see how we are to grow any larger on our Flower shows if the appropriations are not made larger. I think the schedule could remain about the same, but I think there should be an appropriation made for a surplus, to be given to our special calls. I cannot see how we can have special days, unless we have funds to work with, as the regular calls of the schedule will use up all that is offered for prizes.

A few things of interest during the year was our visit to Bayard Thayer's, South Lancaster, and our visit to H. R. Kinney's Farm. Our 70th anniversary in March, and our Winter Meetings which had over 1,300 attendance.

LEONARD C. MIDGLEY, Secretary.

LIBRARIAN'S REPORT

To the Members of the
Worcester County Horticultural Society:

I wish to submit herewith the annual report for 1911-1912. Of the most important books purchased by the Library Committee, the fifteen volumes of Curtis' Botanical Magazine may be noted, this completing the Third Series. The patronage of the Library, shows an increase over the previous year, particularly in regard to books treating upon spraying of trees. The number of books borrowed by the members of the Society is 110, a larger number than last year. A new bookcase has been added to the Library, which will be used for surplus books and magazines. The periodicals which have been bound for the past year, are American Homes and Gardens, English Gardens, Gardening and Gardeners' Chronicle. The following list comprises the books, pamphlets, bulletins and reports that have been received during the year just closed.

United States Department of Agriculture.

Office of Experiment Stations, Vols. Nos. 6 to 10 inclusive. Bulletin No. 245.

Monthly Bulletins of the Library, Vol. II, No. 9, 10, 11, 12. Vol. III Nos. 1 to 8 inclusive.

Massachusetts Crop Report, Vol. XXIV No. 6, Vol. XXV Nos. 1, 3.

Massachusetts Agricultural Experimental Station, Amherst, Mass., Bulletin 139.

New York Agricultural Experimental Station, Bulletin No. 340.

Michigan Agricultural Experimental Station, Bulletin Nos. 265 to 267 inclusive.

Maryland Agricultural Experimental Station, Bulletin Nos. 154 to 168 inclusive. Twenty-fourth Annual Report.

Nebraska Agricultural Experiment Station, Twenty-fourth Annual Report of the University. Bulletins, 123, 130. Press Bulletins 36.

State Board of Agriculture, Annual Report of the Ornithologist, June, 1910.

Ohio Agricultural Experiment Station, Bulletin Nos. 231, 232, 233, 237.

Iowa State College Agricultural Experiment Station, Bulletin 125. Research Bulletin Nos. 1, 2, 3.

Pennsylvania State College Agricultural Experiment Station, Bulletin 113.

Twenty-second Report of the Missouri Botanical Gardens.

Cornell University Agricultural Experiment Station, Bulletin Nos. 270, 273, 289.

Field Museum of Natural History Publication.

Worcester Board of Trade Year Book.

Proceedings of the Twenty-seventh Annual Convention of Society of American Florists and Ornamental Horticulturists.

West Virginia University Agricultural Experimental Station, Bulletin 137, 139. Circular No. 6.

Massachusetts Agriculture Bulletin, Nos. 3, 4, 5.

North Carolina Agricultural Experimental Station, Bulletin 221.

Farmers' Bulletin, Nos. 492 to 502.

Fifty-second Annual Report of the Free Public Library, 1910-1911.

Annual Report of the Board of Park Commissioners of the City of Worcester, 1911-1912.

Worcester City Directory, 1912.

Worcester Weekly Guide.

Gladiolus, by Matthew Crawford.

The Rose, by H. B. Ellwanger.

The Culture of the Chrysanthemum, by W. Wells.

Thompson's Gardener's Assistant, Vols. I to VI.

The Herb Garden, by Francis A. Bardswell.

Roses for English Gardens, by Gertrude Jekyll and Edward Mawley.

Curtis' Botanical Magazine, Third Series, Vol. 52 to 60. Fourth Series, Vol. I to VI.

The Law of the Roadside, donated by Edward W. Breed.

What England Can Teach Us About Gardening, by Wilhelm Miller.

Fungoid Pests of Cultivated Plants, by M. C. Cooke.

A Dictionary of English Names of Plants, by William Miller.

American Insects, by Vernon L. Kellog.

A Manual For The Study of Insects, by John Henry Comstock and Anna Botsford Comstock.

Trees, Shrubs, Vines and Herbaceous Perennials, by John Kirkegaard.

The Plums of New York, by U. P. Hedrick.

Vegetable Gardening, by Ralph L. Watts.

Fruits and Vegetables Under Glass, by William Turner.

Periodicals and Publications

Country Life in America.
Suburban Life.
American Homes and Gardens.
The Garden Magazine.
Florists' Exchange.
Florists' Review.
American Florist.
Gardening.
Horticulture.
Park and Cemetery.
New England Homestead.
New England Farmer.
Rural New Yorker.
The Farm Journal.
The Country Gentleman.
The National Grange Monthly.
The Fruitman and Gardener.
The Worcester Magazine.
The Guide to Nature.

Rhodora.
Bird Lore.
Orchid Review.
Gleanings in Bee Culture.
Meehans' Garden Monthly.
English Papers.
Garden.
Gardening.
Gardeners' Chronicle.

American Catalogues

Andora Nurseries.
American Forestry Co.
Ames Implement & Seed Co.
American Nursery Co.
Bay State Nurseries.
Barnes Bros., Nursery Co.
D. V. Burrell Seed Grower.
Clark W. Brown, Dahlias and Gladiolus Bulbs.
W. Atlee Burpee's.
Bassett & Weller, Dahlias.
Bobbink & Atkins, Nurseries.
Joseph Breck & Son, Seeds.
Boddington's Garden Guide.
Cottage Gardens, Nursery Book.
Arthur Cowee, Gladiolus.
Conrad & Jones Co.
Dreer's Garden Book.
Evergreen Nursery Co.
The Elizabeth Nursery Co.
Elliott Nursery.
Ellwanger & Barry.
Farquhar's Garden Annual.
L. J. Farmer Fruit Catalogue.
Fottler, Fiske, Rawson Co.
Bertrand H. Farr, Hardy Plants.
Gilletts Hardy Fern and Flower Farm.

J. J. H. Gregory & Son, Seedsmen.
Peter Henderson & Co.
Harrisons' Nurseries.
T. S. Hubbard Co.
Hathaway's Dahlias.
Haven Farm Dahlias and Gladiolus.
Isbell's Seed Annual.
F. W. Kelsey Nursery Co.
R. M. Kellogg Co.
J. F. Lovett.
Lager & Hurrell.
Livingston's Seed Annual.
Manda's Pocket Garden Dictionary.
J. B. Morey Nurseries.
McGregor Bros. Co.
L. L. May & Co.
Mills Seed Co.
Richardson Parkinson.
Peterson Nursery.
Royal Palm Nurseries.
Frederic J. Rea, Perennials.
Ross Bros. Co.
Stump & Water Co.
The Storrs & Harrison Co.
W. & T. Smith Co.
The Schmidt & Botley Co.
Stark Bros. Nurseries.
J. Thorburn Co., Bulbs.
B. Hammond Tracy, Gladiolus.
Fred L. Tinkham, Dahlias.
T. C. Thurlow's Sons.
R. Vincent, J & Sons Co.
Vick's Garden and Floral Guide.
Vaughan's Seed Store.
Wilfred Wheeler, Fruit.
George H. Walker, Dahlias.

W. W. Wilmore, Dahlias.
Weeber & Don, Seed Merchant and Growers.

FOREIGN CATALOGUES.

Baths Select Garden Seeds.
George Bunyard & Co.
Barr's Seed Guide.
H. Cannell & Sons.
Cartwright & Goodwin.
James Carter.
Doobie & Co.
Dicksons Ornamental and Forest Trees.
Henry Eckford.
C. Keur & Son.
E. H. Krelage & Son.
Kelway's Manual.
V. Lemoine & Fils.
H. Merryweather & Sons.
Overeen Bulb Trade and Nurseries.
Paul & Sons Nurseries.
Ant. Roozen & Son.
Royal Tottenham Nurseries.
Frederick Roemer Seed Grower.
Soupert & Notting Rose Growers.
Jacs Smits & Co.
Sutton's Sons.
James Veitch & Sons.
Thomas S. Ware Nurseries.
H. Woolman Nursery.
Anthony Waterer Nursery.
Vander Weijden & Co.
H. Wrede, Pansy Specialist.
Webbs' Royal Seed Establishment.

Respectfully submitted,
LUCY M. COULSON, Librarian.

Horticultural Hall, October 31, 1912.

TREASURER'S REPORT

For the Financial Year Ending Oct. 31, 1912

Statement of Receipts and Expenditures

Receipts

Store Rents,	$10,000.00
Hall Rent,	2,435.75
Income from Permanent Funds,	282.32
Interest	298.31
Membership Fees, 9 @ $5.—$45. 5 @ 3.— 15.	60,00
Water (elevator service),	348.57
T. E. Raymond (Rent paid in advance),	112.50
Tickets Annual Reunion (245 @ 75c.),	183.75
Tickets Fall Dinner (1912),	29.00
Furnishings sold,	39.00
Doors sold,	6.00
Office Expense (refund),	.25
Premiums unclaimed (1911),	1.51
Miscellaneous,	5.00
	$13,801.96
Cash on hand, Nov. 1, 1911,	10,122.20
	$23,924.16

Expenditures

Furnishings,		$650.11
Library-books,	$194.32	
Premiums,	2,532.42	
Winter Meetings,	565.19	
Publications,	303.75	
Children's Exhibitions,	79.90	
Eames Fund Premiums (1911),	28.00	
Blake Medals,	60.00	
		3,763.58
Judges,	170.00	
Salaries,	1,850.00	
		2,020.00
Payment on Mortgage,		2,000.00
Interest,	960.00	
Insurance and Taxes,	1,125.40	
		2,085.40
Maintenance of Real Estate,		958.60
Light, Heat and Water,		1,221.72
Janitor Expense,		146.29
Office Expense,		254.51
Library Expense,		21.25
Miscelaneous Expense,		240.37
Fall Dinner (1911),		51.75
		$13,413.58
Cash on hand Oct. 31, 1912.		
Clinton Savings Bank,	1,229.63	
Marlborough Savings Bank,	1,171.62	
Worcester Mechanics Savings Bank,	1,188.68	
Worcester Five Cents Savings Bank,	1,126.14	
Worcester County Institution for Savings,	1,257.25	
	5,973.32	
Worcester Trust Co.	4,537.26	
		10,510.58
		$23,924.16

Statement of Gains and Losses

Gains			Losses	
Store Rent,	$10,000.00		Appropriations,	$5,200.00
Hall Rent,	2,435.75		Office Expense,	254.26
Income from Permanent Funds,	282.32		Judges,	170.00
Membership Fees,	60.00		Library Expense,	21.25
Discount on Premiums,	17.58		Fall Dinners (1911),	18.25
Premiums Unclaimed,	1.51		Winter Meetings (Excess of appropriations),	81.44
Children's Exhibitions (unexpended balance of appropriation),	20.10		Publications (Excess of appropriations),	3.75
Miscellaneous Receipts,	5.00		Eames Fund Premiums ((1911),	28.00
Premiums appropriated (balance not awarded 1911 appropriation),	100.00		Blake Medals,	60.00
			Light, Heat and Water,	827.49
			Maintenance of Real Estate,	952.60
			Insurance and Taxes,	1,125.40
			Janitor's Expense	146.29
			Miscellaneous Expense,	240.37
			Interest,	661.69
			Depreciation,	398.99
				$10,189.78
			Balance to Surplus Account,	2,732.48
		$12,922.26		$12,922.26

Statement of Resources and Liabilities

Resources			Liabilities		
Fitchburg Savings Bank,	$1,032.66		Blake Fund, Principal,	$1,000.00	
People's Savings Bank,	1,148.66		Blake Fund, Income,	32.66	
Worcester Five Cents Savings Bank,	626.78		Dewey Fund, Principal,	1,000.00	
Worcester Mechanic's Savings Bank,	1,538.93		Dewey Fund, Income,	538.93	
		$4,347.03	Eames Fund, Principal,	500.00	
Real Estate,		120,000.00	Eames Fund, Income,	126.78	
Furnishings,		6,000.00	Hadwen Fund, Principal,	1,000.00	
Library-book Account,		2,718.69	Hadwen Fund, Income,	148.66	
Cash,		10,510.58			$4,347.03
F. W. Woolworth Co.		184.71	Premiums Appropriated (not awarded),		415.25
			Premiums Awarded,		2,234.75
			Mortgage Loan,		23,000.00
			Fall Dinner (1912) Tickets,		29.00
			T. E. Raymond (Rent in advance),		112.50
					30,138.53
			Surplus: Balance Nov. 1, 1911.	110,890.00	
			Gain and Loss Oct. 31, 1912,	2.732.48	113,622.48
		$143,761.01			$143,761.01

Respectfully submitted,

BURT W. GREENWOOD, Treasurer.

REPORT OF THE AUDITORS

WORCESTER, MASS., Nov. 6, 1912.

We, the undersigned Auditors of the Worcester County Horticultural Society, have examined the accounts of the Treasurer of the Society for the financial year ending October 31, 1912, and find them correct and the balance deposited as stated in the Treasurer's Report.

H. WARD MOORE,
BENJ. C. JAQUES.

REPORT OF THE CHAIRMAN OF THE FINANCE COMMITTEE

The changes in the banquet hall and kitchen have been completed giving more room and better facilities, also a room has been provided on the same floor to be used for old periodicals and books that the library room could not accommodate but which were too valuable to be disposed of.

In accordance with a vote of the trustees, the finance committee has rented the hall Saturday afternoons and evenings for a moving picture show. This necessitated some changes in the rear of the hall to conform with the requirements of the state police, and provides a much better exit to the fire escape and was advisable to do, whether the hall was used for a moving picture show or not.

Respectfully submitted,

A. E. HARTSHORN, Chairman.

REPORT OF COMMITTEE ON ARRANGEMENTS AND EXHIBITIONS

We spent considerable time on the premium list and then your secretary and chairman supposed we had the proofs in their best form, but in some instances they did not come out as we expected. One of the errors seemed to be for the best as our grape exhibit of Sept. 26th was a feature of our season's exhibitions.

A number of your committee feel that it might be well to have some leading feature in many of our exhibitions. This would make something special to call the public's attention to, and there are many people who are especially interested in some of our more common flowers, fruits and vegetables.

Some of the committee believe that in one respect the Massachusetts Horticultural Society is leading us and, while there is some prejudice here, I hope that the time will come when some of our larger exhibitions will be held on Saturday and carried over Sunday. There are many people in this city who must go somewhere every Sunday, and it would seem to me as though there were few places that would be better for them to spend a little while than at some of our exhibitions.

Some of our members say that we should lose much of our exhibits and that is probably so, but we claim to be working for the good of Horticulture and should be willing to give those members of our city who are busy during our regular exhibition hours a chance to see some of our exhibitions.

The committee at our last two exhibitions were brought to realize how much we had depended on Mr. Putnam, but we hope that by another summer things will be running smoothly again.

Respectfully submitted,

H. R. KINNEY, Chairman.

REPORT OF CHAIRMAN OF WINTER MEETINGS

WORCESTER, MASS., Nov. 6, 1912.

MR. PRESIDENT, AND MEMBERS OF THE WORCESTER COUNTY HORTICULTURAL SOCIETY.

Your committee would report that ten meetings were held in the past winter season of 1912 with subjects of much interest to our members and many of the public not members.

The thanks of the committee are due to Mrs. Percy G. Forbes, Mrs. Scott Pierce and Miss Ida Henderson for the good work they did in charge of Children's Day.

The decision of the Massachusetts Fruit growers convention to go to Boston the coming season will cause the programme for the next winter season to be somewhat changed.

Our annual dinner and social was well attended with unabated interest. The after-dinner speaking was, as usual, of a high order.

The committee also extend its thanks to floor director Myron F. Converse and his assistants for the able manner they conducted the social in the hall after the dinner.

Total attendance at the meetings 1,325, a gain of 400 over last year.

Respectfully submitted for the Committee,

ARTHUR J. MARBLE,
Chairman.

JUDGES' REPORT

REPORT ON FLOWERS

March 7, 1912, the Worcester County Horticultural Society held its first exhibition of the season and it was a credit to the Society and the exhibitors for quantity and quality of the plants and flowers exhibited.

There was no exhibition in April; there were two in May, the first one, owing to the cold, wet, unseasonable weather, outdoor bulbs did not make a good showing; the second one in May was good with the exception of azaleas, molis and tree pæonias.

In June the exhibitions were very good, much better than last year. June 5, the large vases, the specimens not to be tied, were very fine. Iris, German, were extra good, and many good exhibits went without a prize.

Thirteenth. Cut flowers, baskets and pæonias were good.

Twentieth. Cut flowers, amateurs, good. H. T. Roses, 20 vases, one bloom or cluster in each, this was the best shown in this class I have seen.

Twenty-seventh. H. T. Roses, 12 blooms, were good quality, exhibits numerous, the class for six blooms were good and competition very close. Vase of 10 blooms, one shade of color, were all extra good. Vase of 10 blooms, mixed colors, were all fine, full roses, Canterbury bells, Sweet Williams and cut flowers were all good.

July 11. Cut flowers, good; baskets, very good; petunias, extra good; and many exhibitions went without a prize.

July 18. Cut flowers from Amateurs and Florists were both good. Phlox drummondis fair, sweet peas poor.

July 25. Cut flowers, very good; baskets, amateurs, good; tuberous begonias, extra fine.

Aug. 1. Every class well filled and good.

Aug. 8. Was good, especially salpiglossis and perennial phlox

Aug. 15 and 22. I was away.

Aug. 29. Nasturtiums were very fine and many fine exhibits went without a prize. Verbenas and cannas fair; asters, large flowered and many exhibits; gladolus, very good.

Sept. 5. Was a fine exhibition; cut flowers, gladiolus, begonias, tuberous rooted phlox, perennial, all good.

Sept. 12. Cut flowers, 20 vases, baskets, amateurs and florists all extra good. Dahlias, large flowered, good, asters large flowered, 20 vases, good, cannas fair.

Sept. 19. Cut flowers baskets, marigolds and scabiosis, all very good and strongly competed for. Dahlias, 50 vases, were extra good.

Sept. 25. Cut flowers and wild flowers were all good.

Oct. 10. The Library was filled with cut flowers, there were also many among the fruit in the main hall. Seldom at this season of the year are there so many plants in bloom outside.

Taking the exhibitions this year there were more exhibits and the quality of the flowers much better than last year.

GEORGE McWILLIAM, Judge.

Report on Fruit

The exhibition of fruit during the past season has been up to the usual standard, with the exception of pears and peaches. When the pear trees were in bloom heavy rain storms prevented a good set of fruit, and the peach crop was seriously injured by the severe winter and the sudden changes in temperature.

Apples were good but were not so free from blemishes as they were last year; this was caused by the rainy weather at the time of spraying. Wormy and imperfect fruit was obtained where the trees were sprayed at the usual time, while good fruit was the result of the trees being sprayed before all the petals had fallen. This early spraying is not to be recommended, however, because it causes the death of the bees.

Strawberries did very well though the drought injured the late varieties and the raspberries. Grapes, ripening two weeks later than last year, were of unusual excellence. The premiums and prizes of fruit have been awarded as follows.

Strawberries 40, cherries 36, raspberries 3, currant 20, gooseberries 4, blackberries 16, plums 39, peaches 33, grapes 57, pears 83, apples 244, quinces 9, extras 3, making a total of 587 premiums and prizes for the year 1912; 57 less than for the year 1911. There has been a deficiency of plums, peaches and pears.

HERBERT A. COOK, Judge.

Report on Vegetables

Political parties rise and fall—two of them had theirs yesterday—but agriculture and horticulture will never fall or fail, and while we have many hard problems to solve they are natural and not artificial ones and in solving them we become more efficient in business and richer in knowledge, we are not dependent on the whims or passions of the people. The past season has not been without discouragement, but on the whole has been more favorable than that of 1911.

The usual interest has been manifested; but, as often happens, the season and the schedule have been somewhat at variance and some of the exhibitions have not been up to the usual standard. Tomatoes were shown in great variety and excellence.

The most surprising thing in the exhibitions occurred on Sept. 26, in the call for potatoes, when five premiums were offered and only one exhibitor. As usual the collections of vegetables and the Oct. exhibition were the leading features of the season and reflected great credit on the exhibitors.

The collection of squashes shown Oct. 10 by Mr. A. H. Sears, the oldest member of the society, was very fine as was the display of flint corn by Mr. Walter D. Ross and for which a Hadwen medal was worthily bestowed.

CHARLES GREENWOOD, Judge.

WINTER MEETINGS IN FULL

THURSDAY, JAN. 11, 1912.

THE TREE WARDEN'S OPPORTUNITY.

IRVING T. GUILD.

President Edward W. Breed, of Clinton, made the introductory address. After welcoming, he called attention to the display of orchids, which were submitted by George McWilliam, of Whitinsville, whose reputation as an orchid grower is attracting much attention in the horticultural world. The display of calenthes was for exhibition only, but the calanthe laselliane, a new variety recently produced by Mr. McWilliam, was the topic for much discussion after the meeting. The flower was produced from the McWilliamii seed parent, crossed with calanthea vestita oculata gigantea, the pollen parent.

Pres. Breed then introduced Irving T. Guild, of Boston, who was formerly secretary of the Massachusetts Forestry Association.

Mr. Guild spoke of the excellent code of shade tree laws which exists in Massachusetts, and said thnt every Massachusetts city or town which is noted for its beauty, owes its charm largely to its shade trees.

There are five principal causes for poor trees in Massachusetts. They are as follows:

1. Lack of capable officers in charge.
2. Artificial conditions which are unfavorable.
3. Mutilation and careless pruning.
4. Insects and disease.
5. Old age.

Trees suffer less from the last cause than from the first. There is an age limit for all trees, but they seldom reach that limit

under the conditions imposed upon them by the cities and towns.

The greatest damage now being done to trees, is by the gypsy, the brown-tail and the leopard moths, borers, elm beetle, and the elm-bark beetle,—this last being the latest pest that tree wardens have to contend with.

He advised the keeping of the office of tree warden out of politics. In nine cases out of ten, an officer thus elected will not be the right man for the place. He also advised meetings of the friends of the trees, and lectures on their ills, illustrated if possible.

In speaking of mutilation, Mr. Guild said that no work should be done on any trees except by the officers, and remarked that the damage done by irresponsible persons is great. He mentioned the necessity of preventing wires to cross or be attached to trees, and said that spurs should not be used in climbing trees. He also said that pruning, watering, and fertilizing, all help to prolong the life of trees, and that much harm is done by horses being allowed to nibble the bark of the tree to which they are tied.

Continuing, Mr. Guild discussed the conditions of trees on the state highways, and told of the value of expert advice regarding them. He spoke of the neglect of the trees by the public, and said that in most places this neglect is great, it is left to the city and state to care for the trees. He gave Cambridge as an example, calling attention to the number of dead and neglected trees there. He also said that the appropriations for the care of the trees, in the average city and town, is from 30c. to 40c. per tree; but in Washington, D. C., this appropriation amounts to from 75c. to 80c. per tree. He went on to say that experts claim that the purely monetary value of trees is immense, being $75.00 per sq. ft. of dimension, making a tree with a 16-inch diameter worth $100.00. He referred to the New York Court of Appeals as an authority for this statement.

A discussion followed the meeting, and many interesting facts were brought out. Answering one question, Mr. Guild

said that a property owner is entitled to the trees in front of his property if cut down by the tree warden. He can also claim any product of the tree, although he forfeited his right to it when the tree was required for the development of the highway. Mr. Arthur J. Marble, Chairman of the Committee on Winter Meetings, disagreed with that statement, saying that a recent court decision was, that a tree warden has unrestricted authority to take any trees abutting streets, regardless of the owner's desires.

In explaining the privileges of a tree warden, Mr. Guild said that scarcely any other public officer has so wide and unlimited authority in his jurisdiction. He is a dictator in his field, but before he can cut down a tree, he must go through certain formalities. He said this emphasized the necessity of having an efficient tree warden, for he can do much good or harm, according to his ability to discern.

Mr. David Fiske, Grafton, raised the question of what constitutes a shade tree, to which Mr. Guild replied that the matter had never been brought before a court, but is left to the common sense of the official of the community. He said pines and evergreens are not desirable as they are not essentially shade trees, but in some places they furnish a distinct improvement in the landscape.

Pres. Breed recommended the use of dynamite in tree planting, saying that by using ⅓ of a stick, placed about 18″ into the ground, with cap and fuse, the ground would be broken up considerably, making it less difficult to excavate the hole, and would loosen the soil so that the roots would go down easily.

The need of keeping the office of tree warden out of politics; of getting an efficient and intelligent man for the office; of conducting lectures and institutes for the study of what is good and bad for trees; of having books on the subjects of most vital interest to tree wardens, and those most interested in trees; and arousing public interest generally, were all recommended in the address and the discussion which followed.

Mr. Haskins, tree warden of Northboro, and others took part in the discussion.

Others present were: City Foresters Neal, of Worcester, and Colton of Fitchburg, and tree wardens of Northboro, Westboro, and Southbridge.

A vote of thanks was given Mr. Guild for his able presentation of the subject.

NEW ENGLAND AGRICULTURE
as shown by
THE AMERICAN LAND SHOW IN NEW YORK

J. Lewis Ellsworth.

After a few remarks, the President introduced the speaker of the afternoon, Mr. J. Lewis Ellsworth, of Boston.
Mr. Ellsworth spoke as follows:

The Land Show was originally intended as an advertisement of the West, Southwest, and Northwest, but ended by being practically a contest between the Western States and the Eastern. The railroads of the Western section of the country were the principal factors in starting the Land Show. It was held in Madison Square Garden, New York City, from November 3 to 12, 1911, and will probably be held annually hereafter.

The purpose of the Land Show was to provide space to exhibit the products of American soil; to give the people of the farm and country, as well as the town and city dweller, a demonstration, complete in authoritative and graphic information, regarding land opportunities in America; also to depict the progress of American agriculture from prehistoric times, to the present day methods of scientific soil cultivation.

There were demonstrations of agriculture as generally practiced: illustrations of modern scientific farming, an exhibition of dry farming methods, and agriculture under irrigation. Exhibits were secured from (and including) Alaska to Florida, and Mexico to Canada. New York State presented an ade-

quate showing of her agricultural and horticultural resources. There were exhibits of all American staples from sugar cane to corn, and the finest apple, potato and wheat exhibits of the world.

When it was decided to have New England take part in the Land Show, an organization was formed in Boston, of which I was made chairman of the committee. I had many troubles in securing appropriations, exhibits, etc., Massachusetts was the motive power in getting the New England States started toward preparing exhibits for the Show.

At last, however, a small appropriation was secured, with which they had to be content, but which was not large enough to pay all the expenses of the men employed for the arrangement of vegetables, fruits and cranberries. A fine exhibit of tobacco was sent from Connecticut. As none of the committee knew anything about tobacco, except its use, a man had to be employed to set up the cases and show them to the best advantage.

The exhibits from Massachusetts were as follows:

135 boxes of apples.
75 boxes of vegetables.
15 boxes of cranberries.

Corn from W. D. Ross, of Worcester, won first prize.

The Department of Agriculture of the United States Government, Alaska, Mexico and Canada had exhibits of agricultural displays along educational lines.

Displays were made by the leading railroads, the most progressive states, Chambers of Commerce, Boards of Trade, Counties and Cities; Land, Irrigation and Real Estate Companies, as well as by farmers and orchadists.

For every sheaf of wheat from the West, Massachusetts had apples and cranberries. The potatoes of Maine interested many Western visitors. Hot-house cucumbers and tomatoes were on exhibition, and a bystander was heard to voice the belief that they were not real, but made of wax, or some similar substance. One of the committee showed his mistake by cutting

one of the vegetables in question, thereby vanquishing any doubts he may have had.

Vermont had an interesting exhibit of maple sugar, which attracted much attention from the visitors. A fort and battleship moulded from maple sugar, surrounded by ornamental maple-cakes of fancy shapes, and bottles and jars of the maple syrup combined to make a most effective display.

With the exception of British Columbia, the exhibitors of the West seemed to think that the largest of everything should be shown, without regard to quality; while the exhibits from New England showed a perfect uniformity of size and quality. British Columbia exhibited over one hundred different varieties of potatoes. A cheese weighing over three tons, and which required 62,380 pounds of milk to make, was also exhibited, being exhibited by the State of New York.

Many people do not realize that the East has as many advantages and as good soil as many places in the West. This is due largely to the fact that a great many men have gone West and made their fortunes there, who perhaps, failed here in the East. It is true that Eastern men and money have made the West, but that does not prove that the West is any better than the East. One reason for the prosperity of the West is this: men went out there, say, twenty or thirty years ago, bought land for $15 per acre; after cultivating it and improving it by irrigation, etc., they sold it to new-comers for $150, $250, and in places where land was wooded, for $2,000 to $3,000 per acre, with fruit trees eight to ten years old.

On every day of the exposition, tracts of Grain Land, Irrigated Land, Farm s and Orchards were given away to Exposition visitors by popular allotment. This feature undoubtedly attracted many visitors from the farms and rural communities of New York State, New Jersey, Pennsylvania, and other near-by states. It is said that during the first three days, over 213,264 people were present.

With the exception of a small deficit of $15, the committee staid within their appropriation, thus making the cost of the work of exhibiting the products of New England, $1,015.

In the discussion which followed the meeting, Mr. Ellsworth said that there were practically no abandoned farms in Massachusetts. There are some farms whose houses have been burned and never rebuilt, but should you investigate, you would find that there is some one paying the taxes. In cases like this, the owner has generally left the land to grow timber and used as pasture, this being more profitable than growing crops on the land.

A short time ago a member of the Legislature asked Mr. Ellsworth to issue pamphlets by which poor people would be enabled to go into the country, thus ridding the city of a great portion of its poor. Instead, pamphlets were issued for the benefit of the people who had a little money and considerable brain, for it is said that the foreigners who make up the largest amount of our poor, have no knowledge of scientific farming. Then it was found that the people would study only one subject out of the several published in the booklet; so it was decided to issue smaller pamphlets on the most popular subjects. Those which have had the widest publication and distribution are the following:

Orcharding; now in its second edition.
Poultry; third edition now in preparation.
Small Fruits and Berries.

Mr. W. D. Ross was then called upon to speak, but said there were only a few facts about the Land Show that Mr. Ellsworth omitted. One of these was an Alaskan Elk made entirely of Alaskan grasses, as was the rug on which it stood. He also said that there were two hundred Kentucky singers, who entertained the visitors at the Land Show.

Mr. Ellsworth then said that it was wiser to stick to one crop, than, in case this year's crop failed, to change it next year to something else. For, although it may fail this year, who knows but that it will be the most profitable crop on the market next year. A North Orange man, who makes no pretense of being a farmer, made, with the help of his children, $1,500 over and above expenses one year.

Thursday, Jan. 25, 1912.

HAUNTS OF NATURE.

Dr. Edward F. Bigelow.

President Breed called especial attention to the meeting next week, "The Development of Agriculture in Worcester County," by Charles H. White. He then introduced the speaker, Dr. Edward F. Bigelow, of Acadia, Conn. Dr. Bigelow is the editor of the department of Nature and Science in the St. Nicholas magazine, and is wholly familiar with nature, having been a student of it for many years.

Dr. Bigelow had many beautiful stereopticon slides with which to illustrate his talk. The first slides shown were frost forms, photographed on a window on grasses, leaves, etc., and showing a great variety of forms. Dr. Bigelow said that horticulturists were more than enthusiastic about their flowers in spring and summer, but they did not ever notice the beautiful wonderful flowers that Jack Frost planted in the winter time.

Then greatly magnified snowflakes were thrown on the screen, and one remarkable thing about them was that although there were many different flakes shown, each one had six sides, though no two were exactly alike. Dr. Bigelow said that there is no two of any thing alike. "When nature made you and me," said Dr. Bigelow, "she said, 'Never, never, will I make another thing like that!' " And so it is with everything, no one has two eyes which are alike, your hands differ from each other, and your feet.

He also said that if, some chilly day, you put a basin of cold water, with a piece of black cardboard in the bottom, you could, if you watched closely with a magnifying glass see the ice form on the surface, and would see the beautiful frost flowers which are known to scientists as crystalline blooms.

Several slides were shown depicting country scenes which had bits of poetry connected with them, that Dr. Bigelow gave for the benefit of those present.

Dr. Bigelow said that once in New York he visited Tiffany's and was shown a diamond necklace which the clerk alleged

was worth $60,000. He then showed a slide picturing a spider's web, upon which the dew had fallen. This was greatly magnified and the dewdrops resembled diamonds and pearls. Mr. Bigelow said that if spiders' webs were rare they would be worth $60,000, but as they are as common as grass no one thinks they are anywhere as beautiful as diamonds and pearls.

Other slides shown were as follows:

The skunk cabbage (symplocarpus foetidus), which is one of the heralds of spring.

The Horned Owl (Bubo virginianus), shown feeding the young.

Also what might be called a family group of owls, *i. e.*, four young owls, one asleep, one lamenting the fact that they were left alone, and two with their heads together.

The Barn Owl (Strix flammea) with young and feeding same.

The Chickadee (Rarus, atricapillus) with young and feeding same.

The Field Sparrow (Spizella pusilla) and the Chipping Sparrow (Spizella socialis), both with young and feeding them.

A Brook trout was taken while in its native haunts.

A Phœbe bird was shown with her head half-way down the neck of one of her young., that being the way she has to feed it sometimes.

The Brown thrasher (Harpo rhynchus rufus) was shown in various sketches, as feeding young and with young.

A Red-eyed Vireo (Vireonidae) was shown teaching one of its young to sing.

The butterfly weed was shown (Asclipiastuberosa).

The cocoon of the Monarch butterfly and the butterfly itself were shown.

Dr. Bigelow likened the Horned Owl to Dr. Jekyll and Mr. Hyde, being Jekyll during the day and Hyde at night.

The last slides shown were three different scenes of lightning flashed on and off the screen in the manner of lightning. The last scene gradually fade into a sunset, and the sunset faded into the aftermath which invariably follows a sunset.

In closing, Dr. Bigelow asked the listeners to take the child's ever-wondering, ever-searching, view of Nature, and not the economic and utilitarian view of things in Nature which is most often taken by people.

President moved that a vote of thanks be given Dr. Bigelow for his interesting talk. The motion was carried and the meeting adjourned.

The attendance of this meeting was the largest of any which has been held, so far.

Thursday, Feb. 1, 1912.

AGRICULTURAL DEVELOPMENT IN WORCESTER COUNTY.

CHARLES H. WHITE.

It is with a real sense of satisfaction that we, as tillers of the soil and those interested in rural problems, note the increasing general interest in Agriculture and Country Life.

When we realize that Agriculture is our nation's most important industry; that one-half of the population of our country still live under rural conditions; and one-third of the population derives its existence from the soil; that 60% of the men who appear in Who's Who in America were born and bred in the rural communities; that Agriculture is our only permanent resource; when we consider these facts it is not surprising that Agriculture is to-day commanding the consideration of the leaders of our land. Indeed it is to be wondered, in view of the great importance of this industry, that an awakening has so long been delayed. However, may our visions not be clouded by an apparent lack of appreciation in the past, but rather may we be seized with a broad spirit of optimism and rejoice that finally our fundamental industry is beginning to enjoy the dignity that it deserves, and our people at large are appreciating the saneness of the words of George Washington, that Agriculture is the most useful, most healthful and most noble employment of man.

Many reasons might be cited which, in a large measure, have been responsible for this great awakening. Time limits us to but a few. I am of the opinion that the splendid work of Dr. S. A. Knapp, in the South, has contributed largely toward a more progressive idea of farm life. Dr. Knapp organized the forces of Agricultural improvement in the South in such a way that thousands of men, who were living from hand to mouth on almost $175 a year, have been able to grow twice the crops that they grew before, to buy their own homes and educate their children. The surprising thing is, that the boys of the South grew the largest crops of corn that were grown in the entire United States, the average of the ten highest prize winners being 375 bushels per acre. This seems incredible, but the matter has been most carefully investigated and found absolutely correct. Dr. Knapp's operations have not been confined alone to the belt of the South infested with the cotton boll weevil. The General Board of Education of New York, realizing the need of the same kind of work all over the entire South asked Dr. Knapp, as an official of the Department of Agriculture, to expend over a hundred thousand dollars—contributed by the Board—in similar co-operative movements all over the South. The net result has been that, according to the Department of Agriculture, the South, which heretofore grew comparatively little corn, last year grew one-third of the corn of the United States. These remarkable achievements, undoubtedly, have had a great effect in educating our people concerning the possibilities of the soil. The great Agricultural development of the Northwest, the large acreage made possible through methods of dry farming, the work of our Agricultural colleges have all contributed their share. Finally, the New York Land Show, our Boston Fruit Show, and our New England Corn Show have been a means of stimulating the interest of millions in an appreciation of the wonderful opportunities and undiscovered resources of the soil.

Obviously, there is a dire need for this awakening which augurs for a more rapid agricultural development. National problems of grave issue are dependent for their solution upon

a more intelligent tilling of the soil. The high cost of living; the annual immigration of thousands of people, and numerous other problems necessitate that our agriculture become established upon a sounder and more productive basis. Hon. James J. Hill prophesies that, within the next half-century, we will have in this country a population of some 200,000,000 people. Our agriculture must needs be developed extensively and intensively if we are to meet this demand.

Having reviewed briefly the importance of agriculture, the new awakening, and the urgent need for a more systematic development of our agriculture, let us now direct our thoughts more specifically to our subject—Agricultural Development in Worcester County. Worcester has always ranked high in the value of her agricultural products. While I have been unable to secure the present standing of the county in this regard, yet it is doubtful if Worcester enjoys the high standing she has enjoyed in the past. The excellent crops grown here are indicative of the high producing capacity of her soil. Worcester county has for many years ranked high as regards the value of her agricultural products. In fact, she has stood higher among the counties of our country. Surely such a record augurs well for the producing capacity of her soil. While as yet statistics have not been computed with reference to her present standing, yet indications seem to reveal decline. However, no very definite data is available concerning the agricultural status of this county. A thorough agricultural survey would be invaluable in disclosing the facts,

Realizing the paramount importance of securing facts as such a survey would disclose, a state commissioner, Henry Coleman by name, was appointed in 1836, and notwithstanding the fact that his reports were suspended in 1840, the data he collected are regarded as treasures of great practical knowledge, especially such knowledge as pertains to the character of the soils, the reclamation of waste lands, and the adaption of crops. Perhaps one of the most important features of this survey was its effect in stimulating enthusiasm and faith in a more thorough investigation of agricultural conditions,—

this crystallizing, as you will recall, in the formation of a Central Board of Agriculture in 1851. Unfortunately for Worcester County, the survey was suspended before the commissioner investigated this district, leaving us with a very vague conception of her agricultural standing, speaking of the county as a whole.

Obviously, then, a comprehensive survey of the county is fundamental in any attempt toward systematic agricultural development. The purpose of a so-called agricultural survey is to determine the exact facts and then base the lines of action upon these facts. The region should have good topographical and geological maps. The next step would be a soil survey. A study of the local climate should be a part. Later, the natural resources of the area should be known. There should be a thorough farm management survey. The general survey could be properly followed by detailed surveys. Each survey dovetailing with each collateral survey.

The Massachusetts Agricultural College, through its Division of Extension Service, is co-operating with the United States Department of Agriculture, the Worcester Board of Trade, the Worcester Horticultural Society, and other prominent county organizations in an effort looking toward a more progressive agriculture. Already some progress has been made. During the past six months, a government expert has been making careful observations in this country with special reference to soil conditions, the principal inquiry being directed to soils best adapted to apple culture. The results of this study will be invaluable to the party who plans to establish orchards within the borders of this county. An expert has also been studying problems of farm management. The college Division of Extension Service is doing much to promote the rural conditions of this county. There exists to-day, a great reservoir of agricultural knowledge awaiting distribution through agencies which will reach the agricultural masses. The Division of Extension Service of the Agricultural College is a movement to assist every man who lives on the land to a knowledge of the fundamental laws of production relating to his business. The

correspondence courses and lectures are instrumental in presenting the science of agriculture. The Dairy Improvement Association, Agriculture Improvement Associations, demonstration orchards and other efforts demonstrate the practical bearing of the various scientific truths. The Extension Service aims to prove the efficiency of agricultural science in practice.

The Agricultural College, through its Division of Extension Service, has placed an agricultural county field agent in this district. I have the honor of representing the college in this capacity, through an appointment which took effect September last. The county field agent does not pass as an expert on all agricultural and horticultural problems. The very nature and scope of the work would, of necessity, make any such attempt futile. The County Field Agent functions as a clearing house, if you please, between the farmer on the one hand, and on the other, the most reliable agricultural information. He is a co-worker, who must needs be in sympathy with, and an active supporter of, all agencies at work for rural development. The County Field Agent conducts in this connection a demonstration farm, not an experimental farm but a purely business proposition—a farm that aims to produce a profit and, at the same time, increase the soil fertility. Since his appointment the County Field Agent has visited a number of farmers in this county by request, has helped scores of farmers with their problems; has organized courses in agriculture where the demand has been urgent; and lectured before many of the high schools and other organizations in the county in an effort to stimulate a deeper interest in agricultural education. The County Agent plan has been highly successful in Ontario and the same general plan promises to be of great value to the farmers of this county when once firmly established.

We have considered in brief some of the more important developments that have taken place in this county. The extent to which this work will be carried on in the future will depend very largely upon the action of the legislature now in session, in providing the necessary appropriations. It is hoped that the vital importance of this work will be appreciated, and

that these various co-operative agencies may become a means of bringing together the facts of agricultural science and welding them together in a rational system of farm practice, thus meeting the demand for actual demonstrations and adaptability of agricultural practice.

The agricultural development in Europe and the South has revealed great possibilities. This success has only been possible through associated effort. I earnestly believe that by co-operative work in this county, we can develop an agriculture of which we might well be proud. Let us, then, unite our efforts, that Worcester County may lead the counties of our commonwealth in the development of its fundamental resources.

Mr. White is County Field Agent of Worcester County and a member of the State Board of Agriculture.

Ladies' Day, Thursday, Feb. 8, 1912.

HOLLAND.

Mrs. Minna Elliott Tenny Peck.

Mrs. Edward W. Breed, of Clinton, wife of President Breed, presided and introduced the speaker.

Mrs. Peck's interesting subject was illustrated by stereopticon slides which showed the streets, the people, the dress and some of the customs of Holland.

One slide shown was that of a Dutch milk-cart, painted green, which formed a good background for the bright, brass or copper milk cans. These carts are drawn by dogs, but where a person is not able to afford a dog, he or she draws it herself.

Mrs. Peck said that, owing to the great number of tourists which visit Holland every year, it is hard to find the quaint, old costumes and customs of the Dutch people; for they imitate the dress and manners of the people who come there every year. Therefore, if you wish to see the original peasant costume you must go very soon, for soon they will all dress after the manner of Americans and English.

Mrs. Peck said that when they went to Marken, a little island in the northern part of Holland, they decided to make arrangement to go at a different time than tourists usually go go, to see the people as they are everyday, and not when they are posing for the benefit of visitors. When they asked the agent if they could do this, he said he thought so, but he did not know if they could get a boat back that night. When informed that they did not intend to come back that night, the agent told them they could not stay over night. When asked the reason why (for they knew of some people who had stayed there and reported very good accommodations), the agent replied that they would not like the food served at the hotel; but, as they had come to see the people and how they lived, and not to eat, they decided to take the risk. The breakfast served them the next morning was such a contrast to the usual Continental breakfast!

The interior of the hotel was typical of what the old Dutch homes used to be. The fireplace was formed of tiles depicting Bible scenes. Above the fireplace in a niche in the wall were the pillows kept especially for company use.

The caps of the women of Marken are composed of five caps, sewed together.

The boys and girls are distinguished from each other by the fact that the boys have two silver buttons sewed to their blouses and they wear aprons which are figured. Their caps, too, are different from the girls'.

From Marken they went to that city of cheeses—Edam. The time to visit Edam is on a Friday morning for that is market day when people from the north and south come in with their cheeses to be sold. A purchase is made, the cheeses are taken on large trays, carried by porters dressed in a uniform the same color as the tray, to the weigh house. There they are weighed on huge scales by an old weigh master, and then returned to the market place to be placed on boats which go down the river and then to foreign countries.

Next they visited Veere, situated on a little island which forms a part of Zeeland. This city has its Thanksgiving Day

on Oct. 4, for that is the day on which many years ago when Holland went to war against Spain, and the people were dying of the black plague brought on by starvation in a 131 days' siege—relief came in the form of provisions from North Holland. These provisions consisted chiefly of herrings and bread, so, on the 4th of October, the people have those two articles of food as the principle feature of their Thanksgiving dinner table.

Mrs. Peck spoke of Rembrandt, and slides were thrown on the screen, showing his home in Leiden, his wife, Saskia, and many of his famous pictures. At the time when Rembrandt was just beginning to turn his talent to practical purposes the guilds of the little town in which he lived had a fad of having their portraits painted and hung in the town hall. Most of these portraits were painted showing the members of the guild standing in a straight row, and if the guild was a particularly large one, they were painted in two rows, one row of heads showing behind the other. But Rembrandt was daring, and when he painted the portrait of the Surgeons' Guild, he gave a new phase of the art of painting lifelike and natural portraits; he placed the members of the Guild about a dead body, and showed that famous Dutch doctor, Tout, in the centre, discoursing upon the partly dissected hand and wrist of the body before them, while his colleagues looked on interestedly. This portrait made Rembrandt famous, and for a long time he was the most busy artist of all Holland, that land of the artist. But his downfall was caused by a later portrait, "The Night Watch." This portrait, painted of the soldiers of Leiden, was the cause of great disappointment among the most of those who posed for the portrait, and only the captain and lieutenant felt that they got their money's worth out of the portrait. The rest of the group were thrown into a shadow. This failure on the part of Rembrandt to come up to his usual standard of accuracy and perfection lost him many valuable friends and customers, then his beloved wife, Saskia, died, poverty followed, and last he himself died of disappointment and starvation. Many of the audience were disappointed because Mrs. Peck did not show many slides of the flowers of

Holland. She did, however, show the narcissus and the tulip, two of the most favorite flowers of Holland. She told of the tulip craze of 1636 when tulips and other bulbous plants sold for exorbitant prices. Finally, after several months of this craze, the government decided that such buying and selling was illegal, and should have to be stopped. Through this many people lost their fortunes.

In closing her lecture, Mrs. Peck showed the pictures of the queen of the Netherlands, Wilhemina, and her little daughter, Juliana.

Thursday, Feb. 15, 1912.

THE WANDERINGS OF A PLANT COLLECTOR IN WESTERN CHINA.

E. H. Wilson, Arnold Arboretum.

Mr. Wilson has spent the greater part of the last ten or twelve years in the western part of China. He said that what the Chinese do not know about agriculture—getting the most out of a small plot of ground—is not worth knowing.

In speaking of rice-growing in China, Mr. Wilson said that every fall thick nursery beds are transplanted by hand into the fields. Many men, women, and children turn out to the fields to help in the transplanting, and, if they work diligently, they may earn as much as twelve cents a day for their labor.

All the land everywhere is cultivated with some sort of vegetation. The principal vegetables grown in China are squashes and gourds. The tobacco grown in China is of as good quality as can be found anyehere inthe world, but of curing, packing, etc., the Chinese know absolutely nothing.

Formerly, one could travel for a month or more along the banks of the Yangtze River and see nothing but fields upon fields of the opium poppy. The white poppy making the best (or worst) opium, though every now and then, the monotony of white was broken by a field of red poppies. Now, however, you could travel along the river for months and not see a single

poppy field, unless things have changed since 1910. In that year the government issued a decree which said that no more opium poppies should be grown in the Chinese Empire.

Mr. Wilson then spoke of the bamboo, which, he asserted, the Chinese use for nearly everything imaginable. They use it to build their houses, to furnish their houses, to make hats used to protect them from sun or rain, and the leaves of the giant bamboo are used for the soles of women's shoes. They also use bamboo to make paper, and a slide was shown of an old-fashioned pulping machine.

The Yangtze is almost filled with rapids, and dangerous gorges. One of these gorges, of which a slide was shown, was 2,800 feet straight up in the air. The percentage of wrecks in the Yangtze is great.

In the vicinity of Changte there is not a single conveyance on wheels, except in the city itself, where on the level places wheelbarrows are used. In most cases, the backs of coolies have to serve carriers for the luggage of travelers, or for the bricks of tea, etc. which are carried from one part of the country to another.

If you are traveling from one part of the country to another you may walk if you wish; but if you want the mark of respectability stamped upon you, you must ride in a sedan chair. No passport is required in China, but it is safer to have one than not. When traveling in China, it is not a wise thing to take a great amount of baggage with you, for if you do you will have to hire a small army of coolies to carry it for you. You have to be careful to have it equally proportioned amongst them for a coolie can only carry a certain amount.

The scenery of China ranks with that of any other country for beauty, picturesqueness, etc.

The roads in China are abominable, and in constant need of repair. Any little by-path may boast of the title "Road."

There are rest houses and hotels in China, but the accommodations are poor, and the houses themselves are filthy. But you have to make the best of it; and do not think that you can get rid of the filthiness .

The rambler rose (rosa multiflora), with its pink or white flowers, is one of the most attractive flowers ever brought from China to America. The musk-rose also came from China, and its tender constitution has prevented our hybridists from cultivating it as extensively as they wish. Many species of spirea may be found in China. The hydrangea, especially the specie known as the Hydrangea Panticulata, grows, in China to be a small tree, some of them reaching the height of eighteen feet. The Chinese lilac has pendulous flowers, which remind one of the wistaria. The Chinese call it the reflexa. There are forty kinds of honeysuckle in China.

Maize is raised to a great extent by the Chinese, who got it from the Indians of our country many, many years ago.

When traveling in China, there is hardly a shady, woody by-path or road at the end of which is not a shrine, erected to some god of the Chinese. Our beautiful tulip tree originally came from China. It has two species—one, the tulip tree of our country, the other, the tulip tree of China. The Chinese have many beautiful evergreen trees, the most beautiful of these being the lace bark pine tree. It gets its name because, when it has grown very old, the bark takes on a beautiful lacy white appearance. The silver birch and the larch tree also grow to a great extent in China. There are seven belts of climate in China. They are as follows:

1. The vegetable belt, where more rice, tobacco, etc., are grown than anywhere else in China.
2. The pine tree belt, where a great variety of pines and other evergreens may be found.
3. The temperate belt, corresponding to the climate of the United States.
4. A belt similar to No. 2 for shrubs, birch forests, and other trees prevail.
5. This belt is the limit of vegetation. That is, above this belt no vegetable can grow. Barley is the principal grain grown here.
6. Shrubs and scrubs massed together.

7. The alpine meadows begin here, some of them filled up by glaciers. They are 20,000 feet above sea-level.

The juniper, and many other medicinal plants are grown extensively in Northern China.

The baby primrose and the moccasin flower, or lady's slipper, are among the favorite wild flowers of our country, whose arrival here dates back centuries and centuries ago.

But of all flowers of Chinese origin the Chinese lilies are the most beautiful. A slide was shown by Mr. Wilson which depicted one variety which resembles the tiger-lily in minature. There are many, many varieties of Chinese lilies, too many, in fact, to enumerate.

In southern China, the yak, or Chinese mule, takes the place of the coolie, as far as carrying heavy loads of tea, tobacco, rice, etc.

Thursday, Feb. 29, 1912.

WHERE SEEDS COME FROM.

By John Farquhar

Seeds that are produced especially for the seed-markets are not produced in a haphazard manner. A great deal of time and attention is given to such matters as: What is this soil good for? What can be grown to the best advantage on it?

Mr. Farquhar spoke of the flood in Paris two years ago, and said that during that time many fields of roots and plants were washed away, leaving only little patches of plant life here there. Last year we had another extreme, that of heat, which did in its way, as much harm as did the flood, and New Zealand came to the rescue with its seeds.

We owe a great deal to the Roman emperor, Lucullus, who brought home from his conquests many luxuries which were heretofore unheard of in Italy. Among other things, he brought home the plants, or their seeds, whose fruit or vegetable took

his fancy. The peach, the plum, and the cherry, were introduced into Italy by Lucullus, who brought them from China. Later they were introduced in this country.

Some of our finest melons and tomatoes come from Naples, and are admitted to be the best that can be produced.

In Switzerland, large tracts of land are devoted to the cultivation of narcissi, and many varieties of grasses. These grasses are all of the very best, and those which are to be used by other countries are put under the Zurich test, which is admitted by all scientists to be the superior of all other tests, and has been adopted by Germany and other countries as a test for their grasses.

Egg-plant, tomatoes, artichokes, celery, and melons, are the seed-producing plants which are most in demand, and which are grown in Italy.

There are acres of land in Switzerland which are devoted entirely to the production of petunias for seed. Rich, fertile soil does not produce the best seeds; it is the sandy soil of Switzerland and other countries which produce the finest seeds.

A bill was recently introduced into Congress, by a professor of Amherst, which desired the standard of purity in seeds raised. That standard is now 75%, and the bill proposed to have it raised to 97%. Mr. Farquhar said that if this bill was passed, the seed business would decline, for it is almost impossible to procure seeds of more than 75% purity.

There are many different machines for the separating of seeds; those which separate the good from the bad, the different kinds from each other. Mr. Farquhar said that in time perhaps there might be a machine so acutely constructed as to separate the different seeds from each other by their color.

In Germany there are dozens and dozens of farms, owned by seed houses, each one devoted to the production of certain kinds of flower or vegetable seeds. In one of these, where petunias are raised, the fertilizing is done by girls and women with camels'-hair brushes. Other farms are devoted to the production of zinneas, gloxinias, begonias, and cucumbers, and fuchsias.

Germany was the first to produce the sugar beet, and raised the standard of purity of the sugar produced from this beet from 22% to 25%. This plant is now cultivated extensively in California and our southern states.

Denmark raises the primrose, the Chinese variety of which is grown successfully in England, more so, in fact, than it is elsewhere.

Holland has more success in raising spinach, cauliflower, and cucumbers, than she has in anything else, except, of course, her bulbous flowers, the tulip, the narcissus, and others. Holland is known as the "Vegetable Garden of London," because she supplies most of the vegetables for that city,

Norway and Sweden raise a great deal of grass which is used for hay. Sweden raises a goodly amount of grain to supply the foreign markets.

Thursday, March 14, 1912.

FRUIT BUD FORMATION

Prof. B. S. Pickett

The second speaker for the second session of the Massachusetts Fruit Growers Association's annual convention, was Prof. B. S. Pickett, of Durham, N. H., under the auspices of the Worcester County Horticultural Society.

Prof. Pickett gave a very interesting lecture, not only on the subject announced, Fruit Bud Formation, but on the relative values of different methods of planting and caring for fruit-bearing trees.

He spoke at length upon the difference in the growth of two trees, both planted under the same conditions, cared for in the same way, but one was planted in tilled soil, while the other was planted in grassed land. The tree grown on tilled land was of fine appearance, its branches well leafed, while the other, grown on grassed land, was stunted in growth. To prove his point, he showed not only one, but many slides on the screen, of two trees, or two sets of trees, planted under the

same conditions, and cared for in the same way, with the difference in the soil they were planted in. These pictures were taken at different experimental stations in various parts of the world. The difference in the appearance of the trees was, in every instance, marked.

He spoke of the effects, good and bad, of heading back young trees. Too severe heading back makes the trees send out what would, on an ordinary tree, be a fruit spur, but on this one is nothing more than a woody twig, which grows more and more woody as time goes on.

Professor Pickett showed a plan of the different plots of land given over to orchards at the experimental station in Durham, explaining each plot as he came to it; telling the methods of planting, fertilizing, cultivating, etc.

He said that the best commercial fertilizer was composed of nitrate of soda, acid phosphate, and sulphuric potassium; using 150 lbs. of the nitrate of soda, 400 lbs. of the acid phosphate, and 200 lbs. of the suplhuric potassium to the acre. He also said that crimson clover was the best natural fertilizer, and was an excellent thing with which to cultivate the land of an orchard, although it did not affect the growth until the second. At the experimental station in Durham, they usually plant about 25 pounds of crimson clover seed to the acre.

Apples planted in sod soil are of a higher color, but not of so good a quality as those planted on tilled soil.

During the discussion that followed Prof. Pickett's address, the quality and best methods of planting and caring for many varieties of apples were talked over, and many points of interest to the audience were brought out by Prof. Pickett, and others.

W89 CHAPEL

TRANSACTIONS

OF THE

WORCESTER COUNTY

HORTICULTURAL SOCIETY

REPORTS OF THE OFFICERS

FOR THE YEAR ENDING NOVEMBER 1, 1911
AND THE ANNUAL MEETING FOR 1912

PART I

Worcester, Mass.
THE COMMONWEALTH PRESS
50 FOSTER STREET
1912

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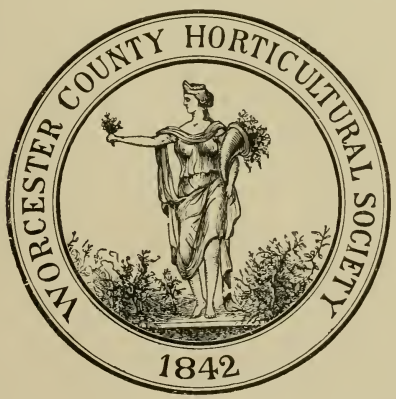

Worcester, Mass.
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1912

OFFICERS AND COMMITTEES

OF THE

WORCESTER COUNTY HORTICULTURAL SOCIETY,

FOR THE YEAR 1911-12.

PRESIDENT:

EDWARD W. BREED, of Clinton.

VICE-PRESIDENTS:

ARTHUR J. MARBLE, of Worcester; CHARLES GREENWOOD, of Worcester;
HERBERT R. KINNEY, of Worcester.

SECRETARY:

LEONARD C. MIDGLEY.
Horticultural Hall, 18 Front St.

LIBRARIAN:

LUCY M. COULSON, of Worcester.

TREASURER:

BURT W. GREENWOOD, of Worcester.

TRUSTEES:

Joseph A. Allen,	Auburn.	Simon E. Fisher,	Worcester
David L. Fiske,	Grafton.	Mrs. Percy G. Forbes,	"
Henry B. Watts,	Leicester.	George E. Francis, M. D.,	"
Edgar M. Bruce,	Leominster.	Joseph K. Greene,	"
Henry W. Carter,	Millbury.	Arthur E. Hartshorn,	"
Herbert A. Cook,	Shrewsbury.	Louis J. Kendall,	"
Mrs. J. Frank Record,	West Boylston.	Frank J. Kinney,	"
William McAllister,	Whitinsville.	H. Ward Moore,	"
George McWilliam,	"	Burton W. Potter,	"
Fred'k H. Chamberlain,	Worcester.	Alden Rice,	"
Mrs. Olive G. Davidson,	"	Myron F. Converse,	"
Edward L. Davis,	"	William J. Wheeler,	"
James E. Draper,	"	Albert H. Lange,	"
J. Lewis Ellsworth,	"	George Calvin Rice,	"
Allyne W. Hixon,	"	Charles W. Wood,	"

STANDING COMMITTEES.

ON FINANCE:

Arthur E. Hartshorn, 1914, *Chairman*, Leonard C. Midgley, 1912, Myron F. Converse, 1913.

ON LIBRARY AND PUBLICATIONS:

George E. Francis, M. D., *Chairman*, Arthur J. Marble, Edward W. Breed.

ON NOMENCLATURE:

Herbert A. Cook, Charles Greenwood, Henry E. Kinney, Herbert R. Kinney.
Albert H. Lange, Arthur J. Marble, George McWilliam, George Calvin Rice.

ON ARRANGEMENTS AND EXHIBITIONS:

Herbert R. Kinney, *Chairman*,
Simon E. Fisher, Arthur J. Marble, Albert H. Lange,
Arthur E. Hartshorn, William J. Wheeler, H. Ward Moore,
The President and Secretary.

AUDITORS.

Benjamin C. Jaques, H. Ward Moore.

JUDGES.

OF FLOWERS, PLANTS, ETC.: George McWilliam,
OF FRUITS, ETC.: Herbert A. Cook,
OF VEGETABLES: Charles Greenwood.

MEDAL COMMITTEE.

Albert H. Lange, Herbert A. Cook, President E. W. Breed.

ON WINTER MEETINGS.

Arthur J. Marble, *Chairman*, Charles W. Wood, Fred'k H. Chamberlain,
The President and Secretary.

APPROPRIATIONS.

Flowers	$1,000.00
Fruit	1,000.00
Vegetables	650.00
Winter Meeting	300.00
Publications	300.00
Children's Exhibitions	100.00

WORCESTER COUNTY
HORTICULTURAL SOCIETY

FOR THE YEAR ENDING NOVEMBER 1, 1911, AND THE ANNUAL MEETING FOR 1912.

PRESIDENT S REPORT

The reports of our various officers indicate that the workers of this Society have been active during the past year and that the several committees have attended to their duties.

The Finance Committee have had an unusual year and I think the building is in a very satisfactory condition, both for our tenants and ourselves.

The Winter meetings were held in the large hall, consequently the audience seemed smaller at times, but the better air and freedom from noise made the change an agreeable one.

In the early Summer during the very unusual drouth, followed by intense heat, our exhibitions were rather discouraging to the officers and special efforts were made to obtain exhibitions from parties outside; as a result we had a fine exhibition of Peonies from the Thurlows, later Gladioli from Messrs. Gage & Chamberlain, also Water Lilies from Dreer.

As the season advanced the exhibitions improved greatly and the quality of the exhibits was as high as could be expected for such a season. In fact it was remarkable that we had such a good showing. Our last exhibition with its magnificent fruit, perfect vegetables and attractive floral display won many compliments.

Our library has received an unusual amount of attention this year and the work of rearranging and cataloguing has been thoroughly done. We have many excellent books and we hope that our members will make use of this important feature of the Society.

Our Secretary has spoken of the deaths during the year, conspicuous among them being our former Secretary.

It is gratifying to note that an unusual number of members have joined this year so that our membership is on the increase.

Your President has been called upon during the year to represent this Society, at the Worcester Board of Trade banquet in April, was the recipient of favors at the N. E. Fair from Pres. Ross and recently was appointed with the Secretary by Gov. Foss to represent the commonwealth at the apple Congress in Denver to be held next month.

In May, while the Spring flowering bulbs were in bloom, several members of our Society accepted an invitation from Mr. and Mrs. Bayard Thayer, of Lancaster, extended through their gardener Mr. Wm. Anderson.

In June the Society was invited to spend the afternoon with Messrs. Elliott and H. Ward Moore on their farm, the strawberry crop being a great attraction and samples were freely taken.

At the last fruit exhibition a member remarked that he won a prize and found out why he did not win others, the latter was evidently worth more than the prize he won. This to my mind is our great work to help each member to grow better products and to establish a high standard. To be successful exhibitors every effort must be put forth, we must plan and labor unceasingly if we would be successful.

It is fitting that I should extend to you my thanks for the courtesies and kind attention bestowed to me as your President during the past year and I wish to thank all who have contributed to the welfare of the Society and to the harmony which I believe exists.

E. W. BREED.

November 1, 1911.

REPORT OF THE SECRETARY

The first meeting of the Trustees held after the Annual Meeting of Society on November 2, 1910. Number of Trustees present, twenty-six.

The records of the Annual Meeting of the Society was read, and voted accepted.

On Library and Publications, it voted Dr. George E. Francis Chairman, Arthur J. Marble, President Edward W. Breed, as Committee.

On Nomenclature, it voted the re-election of Herbert A. Cook, Albert H. Lange, Charles Greenwood, Arthur J. Marble, Henry E. Kinney, George McWilliam, Herbert A. Kinney, George Calvin Rice, as Committee.

On Arrangement and Exhibitions, it voted, Herbert R. Kinney, Chairman, Simon E. Fisher, Arthur E. Hartshorn, W. J. Wheeler, H. Ward Moore, Albert H. Lange, Arthur J. Marble, President Edward W. Breed, Secretary Leonard C. Midgley as Committee.

For Auditor's, it voted the re-election of H. Ward Moore, Benjamin Jaques as this Committee.

Judges on Fruit, Flowers and Vegetables, was re-elected, George McWilliam, Flowers; Herbert A. Cook, Fruit; Charles Greenwood, Vegetables.

Committee on Winter Meetings was selected by President Breed, as follows: Arthur J. Marble, Chairman, F. H. Chamberlain, Charles W. Wood, President E. W. Breed, Leonard C. Midgley, Secretary.

Committee on San José Scale, was voted discontinued.

Appropriations

It was voted the appropriation be the same as previous year.

Flowers	$1,000.00
Fruit	1,000.00

Vegetables	$650.00
Winter Meetings	300.00
Publications	300.00
Children's Meetings	100.00

Salaries

It was voted that the Finance Committee arrange the salaries of its officers and report back to Trustees one week later.

Medal Committee

Herbert A. Cook, Albert H. Lange, President Edward W. Breed, was voted as Committee.

Testimonial to Adin A. Hixon, the Retiring Secretary.

The retiring Secretary of the Worcester County Horticultural Society, Adin A. Hixon, in his many years of service has earned the approbation of every member of the Society in so many ways that it is not easy to take note of them all.

As a painstaking official he not only did the work required of his office, but was always on the alert to promote the interests of the Society in every way possible.

Well informed, both theoretically and experimentally, in every phase of Horticulture, he patiently gave attention and advice to every honest inquirer.

Willing to go anywhere or do anything to encourage the work of horticulture, he gave of his time and strength outside as well as inside his home city, so that through him and his work our Society is well and favorably known throughout New England, and even beyond her borders by his nation-wide correspondence.

For these and other reasons the Worcester County Horticultural Society puts upon record its sincere appreciation of faithful twenty years service of the retiring Secretary.

For the Society, Joseph K. Greene, Charles W. Wood, President Edward W. Breed, Committee. Approved and Accepted.

On motion of Burton W. Potter and seconded by Walter D. Ross, it was voted to appropriate fifty dollars, for the

Finance Committee to look into the matter of making the library more agreeable. Mr. Potter seemed to think that it could have better ventilation, and many things done; which would be of great benefit to the Society. The fifty dollars appropriated to be used for services of an architect.

Adjourned this meeting to November 16, 1910, Leonard C. Midgley, Secretary.

Nov. 11, 1910.

Finance Committee Meeting to fix the salaries of Secretary, Librarian and Treasurer.

The Committee voted as follows:

Secretary	$400.00
Librarian	250.00
Assistant Secretary	250.00
Treasurer	150.00
Janitor	800.00

and the balance of appropriation, $300.00, to be used as they saw fit in minor expenses about the building.

The Finance Committee also voted to have the second Tuesday of each month to approve all bills or any other business coming under their supervision.

This Committee also instructed the Secretary to call a meeting of the Building Committee for Tuesday, November 15, 1910, and also to invite the Library Committee to meet with them to look over the proposition of changing the Library. Arthur E. Hartshorn, Chairman, Leonard C. Midgley, Myron F. Converse for Finance Committee.

The adjourned meeting of the Trustees of November 9.

The call of this meeting was to hear the report of the Finance Committee on Salaries.

The meeting was called to order by Arthur J. Marble, First Vice-President, on account of President Breed being absent on important buisness.

Arthur E. Hartshorn, Chairman, read the report from the Finance Committee.

Recommendation as follows:

Secretary	$400.00

Treasurer	$150.00
Librarian	250.00
Assistant Secretary	250.00
Janitor	800.00
Miscellaneous	300.00

for care of building. Arthur E. Hartshorn, Leonard C. Midgley, Myron F. Converse, Finance Committee.

Dr. George E. Francis thought that on account of there being no such office as Assistant Secretary that of the $250.00 for Assistant Secretary, be added to the Librarian's $250.00 making the Librarian's Salary, $500.00. It was so voted.

Dr. George E. Francis made a motion that the Library Committee have an appropriation made to be used in the new arrangement of books and other necessaries.

This was seconded by Joseph K. Greene, and it was voted not to put any stated amount. Being left to the discretion of this Committee.

Arthur E. Hartshorn made a motion that all members of the Finance Committee not being a Trustee, be allowed to sit with Trustees when in session; and be Trustee ex-officio. This motion was seconded and voted accepted.

Finance Committee Meeting

This Committee voted Leonard C. Midgley Custodian, without salary.

All members of the Building Committee present at this meeting, to open bids for the changes to be made for the Tenant, F. W. Woolworth Co.

The lowest bid being from E. J. Cross $21,302. This did not include new boiler which would cost about $800.00.

Benjamin Jaques made a motion the price of rental be $10,000 per year, for ten years and $10,500 per year for the last five years of lease, making a lease of fifteen years.

This was seconded by Arthur J. Marble, but was not carried.

Myron F. Converse made a motion that the first ten years be $10,000 per year and $12,000 for the last five years. This was seconded by Leonard C. Midgley, and it was so voted.

Members of the Building Commitee as follows: Arthur E. Hartshorn, Leonard C. Midgley, Myron F. Converse, Arthur J. Marble, Benjamin C. Jaques.

Nov. 26, 1910.

First meeting of the Committee on Winter Meetings.

Arthur J. Marble voted Chairman. Adjourned. No special business.

Dec. 20th. Second Meeting of the Committee on Winter Meetings. To work on programme.

Winter Meeting as follows.

Thursday, Jan. 12, 1911. Horticultural Opportunities of To-day, by President Edward W. Breed.

Thursday, Jan. 19th. Our Library. Geo. E. Francis, M. D.

Thursday, Jan. 26th. Fruit Growing in the West. J. Lewis Ellsworth.

Thursday, Feb. 2nd. Using One's Eyes. Rev. Samuel C. Beane, Jr.

Thursday, Feb. 9th. Ladies' Day. Horticulture a Profession for Women, by Miss Laura Blanchard Dawson, Jamaica Plain.

Mrs. Edward W. Breed in charge.

Saturday, Feb. 11th. Children's Day. Entertainment by our Young Exhibitors. Mrs. Percy G. Forbes and Mrs. Harry R. Hildreth in charge.

Thursday, Feb. 16th. Lecture on Horticultural Travels, by Prof. F. A. Waugh, Amherst Mass. Judge F. H. Chamberlain in charge.

Feb. 23, 1911. How Birds and Animals learn with Application to the Extermination of the Undesirable, by James P. Porter, Dean of Clark College.

Wednesday and Thursday, Mar. 8th and 9th. Massachusetts Fruit Growers Convention.

Thursday, Mar. 9th. Subject. Clouds, by Gen. Charles W. Wood.

Dec. 12. First meeting of the Committee on Arrangement, H. R. Kinney, Chairman.

This meeting was to rearrange the Schedule for the following year.

Finance Committee Meeting to Approve all bills and to meet with Arthur J. Marble and B. C. Jaques to decide the amount to be paid Fuller & Delano, for plans made in alterations for Woolworth Co. It was voted to pay $300.00 for services rendered.

January 11th, 1911. Meeting of Committee on Building. Present, Arthur E. Hartshorn, Benjamin C. Jaques, Myron F. Converse, Leonard C. Midgley. This meeting was to decide the different proposals in the alterations.

January 13th, 1911. A Special meeting of the Society was held at ten o'clock A. M.

To hear and act upon the report and recommendation of the Finance Committee with reference to the proposed alterations and improvements to the real estate of said Society, and to take such action as may be necessary to provide funds therefor. To see if the Society will take any action regarding leases of any portion of said property.

The meeting opened with President Breed in the Chair, and thirty-eight members being present.

The following report from the Finance Committee was read by its chairman, Arthur E. Hartshorn.

Worcester, Mass., Jan. 13, 1911.

Worcester County Horticultural Society—

Dear Sirs:

First. Your Finance Committee with the addition of Messrs. Arthur J. Marble and Benjamin C. Jaques, acting under authority given them by your Board of Trustees, at their meeting held March 21, 1910, have considered the proposition for alterations and improvements to the Horticultural building situated on Front Street, Worcester, Massachusetts, whereby better accommodations may be afforded for the present tenants, F. W. Woolworth & Co., and would respectfully report as follows.

That certain plans and specifications relating to the subject matter, and which accompany this report, have been prepared.

These plans provide for excavation of the basement, and alterations thereto, which will suitably equip said basement for store purposes.

Second. In order to provide storage room for the stock of the said tenants, an additional top story to the building has been provided. This addition will correspond to the original building.

Third. An elevator of modern type, running from basement to addition, will be necessary to accommodate these apartments, and the same is herein provided.

Fourth. Your Committee basing their estimates of cost of these alterations upon bids for contracts now in hand, calculate that an expenditure of $21,500 will be involved to complete these changes as outlined.

Fifth. Accompanying this report, will be found proposed leases between this Society and F. W. Woolworth & Co. for the term of fifteen years, the lease includes the stores, basement and proposed top story, the annual rental therefor being $10,000 for the first ten years and $12,000 for the last five years of said period.

Your Committee would further report that these plans and specifications have been carefully examined and accepted by representatives of the F. W. Woolworth & Company.

Therefore, the proposition is now presented in definite form to this Society for final action and your Committee would recommend as follows:

First. That this report, together with said plans and specifications be accepted and adopted and that a Committee be authorized and empowered to direct and supervise the work involved.

Second. That said Committee be authorized and empowered to prepare and direct the execution of all contracts which may seem necessary or expedient to carry out the proposed alterations and improvements, and that the Secretary be authorized and empowered to execute and deliver all contracts and other papers so ordered.

Third. That the Treasurer, with the approval of the Finance Committee, be authorized and empowered to execute and deliver the lease herewith submitted.

Fourth. That the Finance Committee be authorized and empowered to provide all necessary funds of said work and to raise such sum as may be necessary, but not to exceed $25,000 by a loan secured by mortgage upon the real estate of said Society, and that the Treasurer be authorized and empowered to execute and deliver, with the approval of the Finance Committee, such mortgage and note together with such other papers as may be deemed necessary to secure said loan.

Fifth. Your Committee, believing that these alterations should be accompanied by some other changes in our heating apparatus, ventilation and protection against fire, would further recommend that the Finance Committee be authorized and empowered to direct such changes therein as may seem expedient.

Arthur E. Hartshorn, Chairman, Leonard C. Midgley, Myron F. Converse, Finance Committee.

Arthur J. Marble, made a motion that the report be accepted.

Voted. It was voted that the report of Committee be accepted and its recommendations adopted. Unanimous vote.

Judge F. H. Chamberlain ruled that the same Committee be appointed to carry out the changes as proposed. This was seconded by Charles Greenwood and so voted.

January 13th. 1911, Meeting of Committee on Buildings.

A motion by Benjamin C. Jaques, that the contract be given E. J. Cross. Seconded by Arthur J. Marble, and so voted.

A motion by Myron F. Converse that the supervision of the work be given B. C. Jaques which was seconded and so voted.

It was also voted that B. C. Jaques look up the sprinkling system.

Also voted to have James Stewart, of Stewart Boiler Works, look up the boiler situation and report back to Committee.

February 23, 1911, Regular Meeting of Trustees called, being

no quorum, the call was dismissed by Arthur J. Marble in the absence of President Breed.

MEMORANDUM OF THE WINTER MEETINGS OF 1911.

Attendance of	Jan. 12	50
"	" 19	30
"	" 26	60
"	Feb. 2	28
"	" 9	75
"	" 11	160
"	" 16	175
"	" 23	165
"	Mar. 9	250
Total		993

The Society held their Annual Reunion Wednesday evening, March 8, 1911. About 350 were present, and after the dinner listened to an interesting programme of speeches and music.

President Edward W. Breed presided as toastmaster, extending a hearty welcome to all present, he thought the Society had a good deal to be thankful for, and while it had had a glorious past, he believed it had a most promising future, saying that as there had been an age of steam and electricity, so there is now coming an age of Horticulture. He mentioned what the State, Nation, and Schools also Colleges were doing along this line.

The president then introduced Mayor James Logan who, after extending the greetings of the city, gave the principal address of the night.

Charles W. Parker, President of the Massachusetts Horticultural Society, Boston, and their Secretary William P. Rich, both gave an interesting address.

Speeches followed by President of the Worcester Board of Trade, Charles T. Tatman, S. T. Maynard, President of the Massachusetts Fruit Growers. Also speeches from R. W. Bowen, Rhode Island, Hon. A. P. Rugg, Rev. William Hutchins, the Sweet Pea Specialist, and Joseph K. Greene.

Decorations by Albert H. Lange and Leonard C. Midgley.

This reunion was considered one of the best the Society ever held. Music by the Verdi Quartett.

May 10, 1911. Meeting of the Trustees. Called to order by Charles Greenwood Vice-President.. Voted to adjourn, as only eight members were present. No quorum.

May 19, 1911. About twenty-five members of the Society attended the outing to Bayard Thayer's, Lancaster.

An excellent show of Tulip beds, Lilacs in full bloom, and a drive around the estate looking over the very interesting trees of all descriptions.

Lunch was served on the veranda by Mr. William Anderson, gardner for Bayard Thayer. All enjoyed the day.

June 24, 1911. The Society's visit to the Elliott and H. Ward Moore Farm, was much enjoyed by all present. Strawberries being the special feature, owing to a very dry season they were not up to standard. The Moores are certainly among the first in the culture of the strawberry as was shown. A lunch was served by the Messrs Moore.

Trustees Meeting

Thirteen members present, President Breed at this meeting presented Geo. McWilliam two Blake Medals for seedling Orchids. One for 1910, and another for 1911.

These seedlings named Cypripidium McWilliami Insigni, and Calanthe Whitmani.

October 31, 1911. Deceased members for the year ending October 31, 1911.

Ephraim L. Bennett,
Chas. A. Chase,
Adin A. Hixon,
Leonard P. Kinnicutt,
Chas. H. Morgan,
Mrs. F. L. Nelson,
Herbert A. Jones,
Henry Putnam,

Stillman H. Record,
Mrs. Chas. D. Thayer,
O. B. Wyman,
Total deaths, Eleven

New members for the year:

Henry H. Browning,
Mrs. Leonard C. Midgley,
Michael H. Kelley,
Mrs. Erick Linell,
John J. Allen,
Mrs. Edward W. Breed,
Miss Clara Frances,
Mrs. Louis H. Buckley,
Mr. Louis H. Buckey
George J. Stowe,
George Burton Stowe,
George F. Brooks,
Miss Anna M. Moore,
Ralph M. Forbes,
George B. Mullikin,
F. Howard Brown,
Pliny E. Bassett,
Alonzo F. Hoyle,
Col. T. S. Johnson,
Fred D. Aldrich,
Chas. T. Tatman,
Ernest Adshead,
Harry C. Sheppard,
Howard E. Sumner,
George H. Foster,
Chas. Henry Morgan.

Total, twenty-seven.

Annual Meeting, November 1, 1911. The Annual Meeting of the Worcester County Horticultural Society, was held in Worcester, Wednesday, November 1,1911 at 10 o'clock, Forty-three members present and President Edward W. Breed in the Chair.

The report of the last Annual Meeting and the Special Meeting called January 13, at 10 A. M., was read by the Secretary.

These reports were voted accepted.

The Librarian, Miss Lucy Coulson; Treasurer, Burt W. Greenwood; Chairman Finance Committee, Arthur E. Hartshorn, Dr. George E. Francis, Chairman Library Committee; Chairman of Winter Meeting, Arthur J. Marble; Chairman of Committee on Arrangements, Herbert R. Kinney; George McWilliam, Judge of Flowers Herbert A. Cook, Judge of Fruit, Charles Greenwood, Judge of Vegetables; Auditor, H. Ward Moore. All the above officers and judges read reports, and all voted accepted. See report in detail.

David L. Fiske made a motion to give the Finance Committee a vote of thanks for the very efficient service rendered the last year.

This was seconded. A unanimous vote.

The Society then proceeded to elect its officers for 1911 and 1912.

The officers for the year, were re-elected by one vote being cast for each. President, Edward W. Breed, Secretary, Leonard C. Midgley, Librarian, Miss Lucy Coulson, Treasurer, Burt W. Greenwood.

One vote was also cast for Arthur E. Hartshorn for Finance Committee to succeed himself for three years.

Arthur E. Hartshorn Chairman, Leonard C. Midgley, Myron F. Converse, Finance Committee.

The president selected Walter D. Ross, Arthur J. Marble, David L. Fiske, to retire and bring in list of members for Trustees.

Trustees as Follows:

Joseph A. Allen, Auburn, Mass.
David L. Fiske, Grafton,
Henry B. Watts, Leicester,
Edgar M. Bruce, Leominster,
Henry W. Carter, Millbury,
Herbert A. Cook, Shrewsbury,
Mrs. J. Frank Record, West Boylston,
William McAllister, Whitinsville,
George McWilliam, Whitinsville.
Frederick H. Chamberlain, Worcester,
Mrs. Olive G. Davidson, "
Edward L. Davis, "
James E. Draper, "
J. Lewis Ellsworth, "
Simon E. Fisher, "
Mrs. Percy G. Forbes, "
George E. Francis, M. D., "
Joseph K. Greene, "
Arthur E. Hartshorn, "

Louis J. Kendall,	Worcester
Frank J. Kinney,	"
H. Ward Moore,	"
Burton W. Potter,	"
Alden Rice,	"
Myron F. Converse,	"
William J. Wheeler,	"
Albert H. Lange,	"
George Calvin Rice,	"
Chas. W. Wood,	"
Allyne W. Hixon,	"

Allyne W. Hixon, Myron F. Converse, Albert H. Lange, new trustees.

The same Vice-Presidents re-elected. Joseph K. Greene made a motion that the salaries for the officers be referred to the Trustees (it so voted).

Joseph K. Greene made a motion the appropriation be same as last year. So voted.

Mr. Adshed made a motion that the certificate for members be more elaborate, the same to have the President and Secretary's name affixed.

Also to have the seal of Society added.

It was voted referred to the Committee on publications.

The question was brought up about having the By-laws changed so as the Finance Committee would be Trustees. This is to be brought up at the next Annual Meeting held in 1912 for its adoption.

Reports of the shows during last year will be found in Secretary's book printed for this purpose.

LEONARD C. MIDGLEY, Secretary.

LIBRARIAN'S REPORT

To the Members of the
Worcester County Horticultural Society:

As Librarian of the Society for the years 1910–1911, I respectfully submit the following report.

The most important work which has been carried out during the year, has been the rearrangement of the books on the shelves, according to their subjects.

Many bulletins have been received from the Agricultural Experiment Stations, etc., and filed in their proper places.

The number of books taken out of the Library is 82, but this of course does not include the books and periodicals consulted from time to time by the members.

The Library Committee has added several new books for the year 1911, which have helped to satisfy the wants of the readers of our Society.

Some of the principal works which have been bound are, the English Garden, Gardeners' Chronicle, American Homes and Gardens, and the Transactions of The Massachusetts Horticultural Society.

I wish to thank the Library Committee for the very valuable assistance rendered me as Librarian.

The additions to the Library during the year just closed, by purchase or by gift, will be found in the list herewith given.

United States Department of Agriculture.

Office of Experiment Stations. Circular 105, 106.

Bureau of Entomology. Circular 134.

Bureau of Animal Industry. Circular 170.

Forest Service. Circular 176.

Farmers' Bulletin, 440, 442, 447, 453.

Monthly Bulletins of The Library.

Vol. 1. Numbers 9, 10, 11, 12.

Vol. 11. Numbers 1 to 8 inclusive.

Monthly Lists of Publications, November to September inclusive.

Massachusetts Agricultural Experimental Station, Bulletins 137, 138.

Massachusetts Crop Report.

Massachusetts Agricultural Orcharding Bulletin, Number 2, 1909.

Massachusetts Agricultural College, Amherst, Bulletin No. 3, Vol. 1, 1911.

Maine Agricultural Experimental Station, Bulletin 393, 396, 397, 401 and 410.

Connecticut Agricultural Experimental Station, Vol. 7, No. 3, 1911.

New York Agricultural Station. Bulletins, 326, 327, 329, 330, 331, 332 of 1910, 333 to 339 inclusive, of 1911.

Cornell University Agricultural Experimental Station of The College Bulletin, 295.

Pennsylvania Agricultural Experiment Station. Bulletins 102, 104, 105, 106.

Maryland Agricultural Experimental Station, Bulletins 148 to 153 inclusive.

23rd Annual Report.

West Virginia Agricultural Experimental Station, Bulletins, 129, 130, 131, 132.

North Carolina Agricultural Experimental Station, Bulletins, 210 to 220 inclusive.

Ohio Agricultural Experiment Station, Circulars, 105 to 112 inclusive, Bulletins, 216 to 226 inclusive.

29th Annual Report 1909–1910.

Michigan Agricultural Experimental Station, Bulletins 261, 262, 263, 264. Circular Numbers 11, 12.

Iowa Agricultural Experimental Station Bulletin 119, 120, 122, Press Bulletin 25.

South Dakota Agricultural Experimental Station, Bulletins 123, 124, 125, 126.

Nebraska Agricultural Experimental Station, Bulletins 115 to 122 inclusive. Press Bulletin 134.

University of Nebraska 23rd Annual Report.

Perdue University Agricultural Experimental Station.

Indiana, Bulletins 135, 149, 152. Circular 27.

Long Island Agronomist. Numbers 4 to 12 inclusive, Vol. V, Number 1, 2, 3.

Proceedings of The American Pomological Society, Session of 1909-1910.

The Massachusetts Fruit Growers Association, 1906–1910. Reports of the 12th to the 16th Annual Meetings.

19th and 20th Annual Report of The Trustees of Public Reservation, 1909 and 1910.

State Board of Agriculture, Bulletin 1, 1910.

Report of The State Inspector of Apiaries for the year 1910.

Transactions of Massachusetts Horticultural Society, Part II, 1910, Part I, 1911.

Massachusetts. Her Agricultural Resources, Advantages and Opportunities with a list of Farms for Sale. First and Second Editions 1910 and 1911.

Mendel's Principles of Heredity by W. Bateson.

Dwarf Fruit Trees by F. A. Waugh.

A Woman's Hardy Garden by Helena Rutherford Ely.

Bush Fruits by Fred W. Card.

Plant Breeding by Hugo DeVries.

Our Insect Friends and Enemies by John B. Smith.

The Business Hen by Herbert Collingwood.

The American Apple Orchard by F. A. Waugh.

Fertilizers, Onion Raising, Squashes, How to Grow Them, Carrots, Mangold Wurtzels, and Sugar Beets, Cabbages and Cauliflower. By James J. H. Gregory.

Manual of Gardening by L. H. Bailey.

Dry Farming by John A. Widtsoe.

How to Make A Fruit Garden by S. W. Fletcher.

Pansies, Violas and Violets by William Cuthbertson.

The Sweet Pea Annual 1911, by Charles H. Curtis and Horace J. Wright.
French Market Gardening by John Weathers.
The Book of Garden Pests by R. Hooper Pearson.
Daffodils by Reverend J. Jacob.
Orchids by James O'Brien.
Carnations by T. H. Cook, James Douglas and J. F. McLeod.
Rhododendrons by William Watson.
Pronunciation of Plant Names.
Weeds of The Farm and Garden by L. H. Pammel.
The Practical Flower Garden by Helena Rutherford Ely.
Curtis Botanical Magazine Vols. 135 and 136.
Worcester City Dictionary, 1911.
Worcester Weekly Guide.

Publications and Periodicals

The Garden Magazine.
American Homes and Gardens.
Country Life in America.
Suburban Life.
Rural New Yorker.
Country Gentleman.
New England Homestead.
Florist Review.
Florist Exchange.
American Florist.
Horticulture.
Park and Cemetery.
Gardening.
New England Farmer.
The Farm Journal.
The Worcester Magazine.
The Fruitman and Gardener.
The Guide to Nature.
Rhodora.
The National Grange Monthly.

Bird Lore.
Gleanings in Bee Culture.
Orchid Review.
Meehans Garden Bulletin.
English Papers.
Garden.
Gardening.
Gardeners' Chronicle.
Journal of The Royal Horticultural Society.
Report of The Royal Horticultural Society, Part I, II.
Book of Arrangements for 1911.

AMERICAN CATALOGUES.

Andora Nurseries.
American Forestry Co.
The Bay State Nurseries.
P. J. Berckman Co
J. J. Bell Seed Co.
The Barnes Brothers Nursery Co.
Broomhall's Dahlia Catalogue.
Boddington's Catalogue.
Arthur T. W. Atlee Burpee and Co.
Bobbink and Atkins.
Cushman Gladiolus Co.
Arthur Cowee.
The Conrad and Jones Co.
Henry A. Dreer.
Ellwanger and Barry.
The Elizabeth Nursery Co.
Elliott Nursery.
Ela's Dahlia Catalogue.
L. J. Farmer.
Fottler, Fiske, Rawson Co.
Farquhars.
Fairview Seed Farms.
J. J. H. Gregory and Son.
Edward Gillett.

T. S. Hubbard Co.
Hathaway's Dahlias.
Henderson's.
D. Hill's Nursery.
The Haven Farm Dahlias.
George S. Josselyn Catalogue.
L. L. May and Co.
The McGregor Bros. Co.
Mills Seed Co.
H. P. Kelseys Hardy American Plants.
F. W. Kelsey Nursery Co.
R. M. Kellogg Co.
Mills Seed House.
J. T. Lovett Nursery.
The Livingston Seed Co.
Manda's.
Thomas Meehan and Sons.
Northrup King and Co.'s
Old Colony Nursery.
F. R. Pierson Co.
Richard Parkinson.
Ross Brothers Co.
Frederic J. Rea.
William H. Richardson, Dahlias.
Royal Palm Nurseries.
Stark Brothers Nursery.
B. Hammond Tracy, Gladioli.
William Toole and Sons, Pansy Culture.
Thornburn's Bulbs.
Fred L. Tinkham.
Charles H. Totty, Chrysanthemums.
William F. Turner and Co., Dahlias.
W. W. Wilmore, Dahlias.
Vaughan's Seed Catalogue.
A. Vincent, Jr., and Sons Co., Geranium.
Vicks Garden and Floral Guide.
The Nursery Exchange of New England.

Wilfred Wheeler, Hardy Fruit Plants.
George S. Woodruff, Gladiolus.
George H. Walker, Dahlias.
Wynd-Hurst Dahlias.
Weeber and Dorr, Seed Merchants and Growers.

FOREIGN CATALOGUES

Ernest Benary.
Cayeux and Le Cherc.
H. Cannell and Sons.
Dobbie and Co.
Dickson's Nurseries.
Eckford Seed Specialist.
Haage and Schmidt.
M. Herb.
Hobbies.
E. H. Krelage and Son.
Kelway's Manual.
V. Lemoine et Fils.
Henry Mette, Seed Grower.
H. Den Ouden.
Pitcher and Manda.
Paul and Sons.
Ant, Roozen and Sons.
Julius Roehrs Co.
The Royal Tottenham Nurseries.
Frederick Roemer.
Loupert and Notting.
Jacs Smith.
J. C. Schmidt.
Sutton Sons.
Louis Van Houtte Pere.
James Veitch and Sons.
Anthony Waterer.
R Wallace and Co.
Gt. Van Waveren and Kriujff.

Respectfully submitted,
LUCY M. COULSON, Librarian.

Horticultural Hall, Oct. 31, 1911.

REPORT OF THE TREASURER

FOR THE FINANCIAL YEAR ENDING OCT. 31, 1911.

At the beginning of the past year, your Treasurer, with the approval of the Finance Committee introduced an up-to-date system of accounts. Under the direction of the Finance Committee, an inventory of all the property of the Society was taken, and these values were entered upon the books. Very large "apparent" gains over the previous year will be noted in the items of Real Estate, Library Books, and Furnishings, but it should be remembered that they are only apparent, for they were in existence before, though they did not appear upon the books.

It will also be observed that the form of the report is somewhat changed—the results only of the year's business being given and the detail omitted, since it appears from day to day in the books of the Society. The following statements showing the condition of the finances of the Society on the 31st day of October are therefore respectfully submitted.

Respectfully submitted,

BURT W. GREENWOOD, Treasurer.

Statement of Gains and Losses

Gains			Losses	
Inventory,		$108,000.00	Interest,	$143.05
Store Rent,	$8,541.65		Appropriations (Out of income),	5,200.00
Hall Rent,	2,265.50		Premiums of 1910 paid,	2,512.79
Membership Fees,	112.00		Judges,	170.00
Children's Exhibitions (Unused appropriation),	26.90		Light, Heat and Water,	734.09
Income from Perm. Fds. (Dewey and Eames Fds.),	52.37		Insurance and Taxes,	1,248.69
		10,998.42	Maintenance of Real Estate,	4,790.48
Premiums of 1909 unclaimed and returned,		.67	Winter Meetings (Excess of appropriation),	5.48
			Publications (Excess of appropriation),	27.18
			Janitor's Expense,	96.92
			Office Expense,	265.87
			Miscellaneous Expense,	537.38
			Maintenance of Furnishings,	31.15
			Library Expense,	19.05
				15,782.13
			Net Gain,	103,216.96
		$118,999.09		$118,999.09

Statement of Resources and Liabilities

Resources			Liabilities		
Savings Bank Books.			Blake Fund, Principal Account,	$1,000.00	
Fitchburg Savings Bank,	$1,050.24		Blake Fund, Income Account,	50.24	
Peoples Saving's Bank,	1,104.06		Dewey Fund, Principal Account,	1,000.00	
Worcester Five Cents Savings Bank,	629.38		Dewey Fund, Income Account,	665.97	
Worcester Mechanics Savings Bank,	1,665.97		Eames Fund, Principal Account,	500.00	
		$4,449.65	Eames Fund, Income Account,	129.38	
Real Estate,		120,000.00	Hadwen Fund, Principal Account,	1,000.00	
Furnishings,		5,787.88	Hadwen Fund, Income Account,	104.06	
Library-books,		2,524.37			$4,449.65
Cash,		10,122.20	Present Worth,		110,890.00
F. W. Woolworth & Co.,		139.05	Premiums Appropriated,		465.00
			Premiums Awarded,		2,185.00
			Mortgage Loan,		25,000.00
			Fall Dinner (cash for tickets),		33.50
		$143,023.15			$143,023.15

Statement of Receipts and Expenditures

Receipts

Cash, Balance on hand Nov. 1, 1910:		
Savings Banks,	$5,518.58	
Worcester Trust Co.,	2,154.46	
		$7,673.04
Income		
Store Rent,	$8,541.65	
Hall Rent,	2,265.50	
Interest,	310.28	
Membership Fees,		
17 @ $5.—$85.		
9 @ 3.— 27.		
$112		
Less Cr. in Printing 5	$107.00	
Premium of 1909 unclaimed and returned	.67	
Winter Meetings (290 reunion tickets @ 75c)	217.50	
Permanent Funds,		
Blake Fund, $75.00		
Dewey " 24.37		
Eames " 28.00	127.37	
Children's Exhibitions (Refund of overpaid bill)	.50	
Mortgage Loan	25,000.00	
Fall Dinner (Sale of tickets)	33.50	
		$36,603.97
		$44,277.01

Expenditures

Furnishings,		$287.88
Library-books,		24.37
Interest (on mortgage loan),		453.33
Premiums of 1910,		
Flowers,	$1,054.00	
Fruit,	878.00	
Vegetables,	605.00	
	$2,537.00	
Less discount,	24.21	$2,512.79
Blake Medals,		75.00
Salaries,		1,850.00
Light, Heat and Water,		873.14
Insurance and Taxes,		1,248.69
Maintainance of Real Estate (including alterations),	$4,790.48	
Additions to Real Estate,	20,000.00	
		24,790.48
Winter Meetings,		522.98
Publications and Periodicals,	$327.18	
Less debit for membership,	5.00	
		322.18
Children's Exhibitions,		73.60
Office Expense,		265.87
Janitors' Expense,		96.92
Miscellaneous Expenses,		537.38
Library Expense,		19.05
Maintenance of Furnishings,		31.15
Judges,		170.00
		$34,154.81
Cash Balances on hand, Oct. 31, 1911.		
Marlborough Savings Bank,	$1,126.14	
Clinton Savings Bank,	1,181.91	
Worcester County Institution for Savings,	1,208.45	
Worcester Five Cents Savings Bank,	1,082.42	
Worcester Mechanics Savings Bank,	1,142.54	
	$5,741.46	
Worcester Trust Co.,	4,380.24	
Cash in hand,	.50	
		$10,122.20
		$44,277.01

REPORT OF THE AUDITORS

WORCESTER, Nov. 1, 1911.

We the undersigned Auditors of the Worcester County Horticultural Society have examined the accounts of the Treasurer of the Society and find them correct and the balances properly deposited or accounted for.

H. WARD MOORE,
BENJ. C. JACQUES.

REPORT OF THE CHAIRMAN OF THE FINANCE COMMITTEE

The Committee on alterations for The F. W. Woolworth Co., after several conferences with representatives of the Company agreed to make the desired alterations for an increased annual rental of $2,500 for 10 years and $4,500 for the next 5 years, giving a lease for that period.

The price for the work including necessary changes to the elevators and for heating was 23,936.88; other expenses, including architect, engineers and supervising bills 853.60, making a total of $24,790.48.

The necessary funds were procured by placing mortgage for $25,000 at 4%.

Respectfully submitted,
A. E. HARTSHORN, Chairman
Finance Committee.

REPORT OF COMMITTEE ON ARRANGEMENTS AND EXHIBITIONS

The changes in the numbers of our committee from nineteen (19) to nine (9), while it may be easier to do business, we are not so sure to get the sentiment of the members as well as formerly and for that reason I wish to call your attention to a few changes that seem to us might be to the advantage of the best interests of the exhibitors.

While these changes are within the jurisdiction of the committee they are in a way quite important.

It did not seem desirable this season to make any decided changes, and while there has been some doubt expressed by some of the exhibitors about the advantage of those we did

make, we trust that you will not be too hasty in deciding on their merit.

We were at first taken to task for the numerous mistakes in the premium list. While they were just mistakes, the list has usually been so well printed that it was quite noticeable.

The season has been such that our exhibitions have not been as large as they usually are and there was perhaps more trouble in exhibits not coming in on schedule time, but I think no dates were changed and the judges were advised to consider the unfavorable conditions.

The public seemed to think that the exhibitions were all that could be expected under the circumstances, and they have been well attended.

The committee has not been troubled by protests or other unpleasant differences of opinion of its members or the exhibitors.

Under General Rules for all Exhibitions, Section E—"No person shall take more than one premium under the same number." There has been some difference of opinion whether a person may make more than one entry, and we have had a few cases this year when the Judge was obliged to change his awards after the cards were turned, and if it was to become the rule would make considerable trouble. It would seem to be desirable to change it to read, "No person shall make more than one entry under the same number."

Under Rules and Regulations, the last section of No. 1 reads, "Between 2.15 and 3 o'clock the Hall will be in exclusive charge of the Committee on Arrangements and Exhibitions, who will allow no one else to be present." There was some call to have this rule enforced this year but the committee was never asked to vote on it. This was at one time in force and it has many advantages but it is hard on those exhibitors who have to spend all the time until 2.15 getting their exhibits out and have business to attend after the exhibition is open and there are others that find time to run in between 2 and 3 that could not get in later, so I trust it will not be necessary to enforce this rule, and think if it was changed to read, "Between

2.15 and 3 o'clock the Hall will be in exclusive charge of the Committee of Arrangements and Exhibitions," this will give them a chance to do as they think best without breaking one of our rules.

"Rule 2. Competition for premiums is open to all residents of Worcester County, but a discount of one-third of the amount will be made from awards to persons who are not members of the Society."

It would seem as though the time had come to cut out this discount. I suppose it amounts to only a few dollars a year. We should encourage new exhibitors and later try to interest them to become members.

H. R. KINNEY, Chairman.

CHAIRMAN OF WINTER MEETINGS REPORT

Worcester, Massachusetts, November 1, 1911.

To the Officers and Members of the Horticultural Society.

Gentlemen:

Meetings for papers and discussion were held by your Committee during the winter season, 1911, beginning January 12, 1911, with President Edward W. Breed as the essayist and closing with the Mass. Fruit Growers Convention and Gen. Charles W. Wood as one speaker.

The thanks of the Committee are due to Mrs. Breed on account of her care of Ladies' Day and to Mrs. Percy G. Forbes and Mrs. H. R. Hildreth for the fine entertainment provided for Children's Day. The total attendance very nearly one thousand; the largest number present being at the talk of Rev. Percy Epler which was 260.

At the annual reunion and dinner, President Breed presiding, we had a record attendance—using the entire capacity of the enlarged dining hall. The thanks of the committee are also

due floor director Myron A. Converse and his assistants for services well rendered.

Respectfully submitted,
ARTHUR J. MARBLE,
Chairman of Winter Meetings.

JUDGES' REPORT

Report on Flowers

Owing to a very dry season Flowers of all kinds very poor until the latter part of the season when they commenced to improve. But on the whole the showing was poor.

GEORGE McWILLIAM, Judge.

Report of the Judge on Fruit

The judge of fruits of the Worcester County Horticultural Society respectfully submits his first annual report for the year 1911.

This year has been very trying for fruit culture as a very cold April and a hot May caused a partial failure of the strawberry crop, and the drought injured raspberries and the heat goosberries. The exhibitions of these fruits were not of the best; in fact not as good as in former years. Peaches, plums and pears were about the same as they have been in previous years. Cherries were extra good and apples were as good as usual and of better color. Grapes were two weeks earlier than usual. The premiums of fruit have been awarded as follows.

Strawberries 32, cherry 34, raspberry 9, currant 21, gooseberry 1, blackberry 14, plums 51, peach 42, pears 113, apples 258, grapes 51, quinces 8, extras 10, making a total of 644 premiums and prizes for the year 1911.

HERBERT A. COOK.

Report of Judge of Vegetables

The exhibition of vegetables during the past season has not been up to the usual standard either in quantity or quality. This is no criticism on the zeal or ability of the growers, but

owing to climatic conditions over which man has not as yet obtained full control. There have been individual exhibits of marked excellence but as a rule they have fallen below the average; this has been due mainly to the extremely dry season though other conditions have contributed to the result. In one case a heavy shower that struck a small section did even more damage than the drouth. In another small section a hail storm did much damage, while in many of the small gardens the cut worm destroyed all the earliest crop.

The yield of nearly all crops has been far below normal and as a result the price to the consumer has been high thus adding to the "high cost of living," a condition no politician can eliminate regardless of pre-election promises.

Squashes and melons did unusually well. The exhibition of squashes Sept. 28th was very fine, and the potatoes were very creditable though not as fine as in some seasons. The exhibit of melons Sept. 14th was the best ever seen in this hall. The collections of vegetables Sept. 21st was of great excellence, being the most attractive exhibition of the season, several new exhibitors competing and making a very creditable exhibit.

Celery has suffered more perhaps than any other crop. Germination was very poor, and the weather so dry and hot at the time of transplanting it was to save the plants and get them growing and after that was accomplished the blight struck a great many fields and in several cases in this vicinity the crop is a total failure. Owing to the unfavorable conditions the seed of some varieties is very scarce and is held at almost prohibitive prices. With peas selling from ten to sixteen dollars per bushel and Golden Celery seed from fourteen to twenty dollars per lb. the prospect is not very bright for extensive acreage next season.

The season of 1911 will be remembered as one of the most difficult in which to attain satisfactory results, and has furnished ample cause for study as to the best methods to pursue to overcome adverse natural conditions.

The children's exhibitions attracted the usual interest and reflected much credit on the youthful gardeners.

CHARLES GREENWOOD, Judge.

HORTICULTURAL OPPORTUNITIES OF TO-DAY

Mr. Chairman, Ladies and Gentlemen:

As it is near the beginning of the New Year it seems fitting that I should bring its greetings to you, so I wish you all a happy and prosperous New Year and hope that this society may have a year of great usefulness.

I shall try to state fully this afternoon the reasons why we are in a position to be helpful to others and the possibilities that are ours. To-day seems to be the beginning of a new era in the affairs of the world. We hear the politicians speakiug about the new nationalism, the farmers talking about the new agriculture, and business men conversing about the new commercial era. It is along these lines I think we are justified in taking up the subject, Horticultural Opportunities of To-Day.

In speaking of these opportunities I want to take up Horticulture in its broadest sense, and perhaps trespass in the fields of Agriculture. I am glad we live to-day in the good new times, I am glad that we live in New England, and in Massachusetts and in Worcester County, for, I think the opportunities we have here are as good as they are in other places, and it is interesting to note that while many have followed Horace Greeley's advice to go west, the time has come when the tide has changed, and New England farms are being bought by the people of the Western States.

The two greatest factors that mould the Horticultural world to-day are the scientific, or educational, and the commercial, or business. Practical farmers and book farmers have become one. Years ago we considered them two distinct persons. To-day they are one and the same.

In the matter of education it is interesting to note how much more practical it is at the present time than formerly, and how

we are beginning at the very start of life, the children being taught this very interesting study in their gardens.

We can look for great results in the work of children's gardens, of which Worcester has one of the best examples. I refer to the Garden City of Worcester. As we know our ex-secretary was interested in this work, we may feel perhaps that it is in some way connected with this society. I think the fact that these children become owners of property, even of only a few vegetables, creates in them a respect for other property they do not own, a point the children of to-day need taught to them, and to my mind this is one of the best methods of accomplishing this work. We also note that the State Board of Education recommends in every way the Agricultural Schools as well as the Industrial Schools.

I am very proud of the work that is being done in our state college at Amherst, it has made a great advance in the last decade; having classes in the graduate course that are largely attended, also a summer school which is attended by many teachers. The short courses are carried on in a practical manner. They are addressed by specialists who do not come to them from a literary but from a business standpoint, intending to show them the business and practical side of Horticulture. They are also taking up Floriculture so that they may be able to carry it on successfully. In their extension work they have cars, travelling about from place to place with samples of agricultural products that demonstrate what can be accomplished. Where the individual cannot come to the college, the college is thus brought to the individual, "When Mahomet would not go to the mountain, the mountain was brought to Mahomet."

Then there is an experiment station for the benefit of the people of the state, where officials are willing to assist in any way that we want, regarding the analysis of soils and fertilizers. It is interesting to note the result of all this work by comparing the scholars of twenty-five years ago with the scholars of to-day. I happened to be acquainted with the class twenty-five years ago, five of whom I intimately know, and out of the

five, only one turned his time and attention to the products of the soil.

There are six hundred and ten scholars in the school at Amherst to-day, ninty-one per cent. having signified their intention of following an agricultural vocation, this to my mind shows the success of that institution. Horticulture is receiving a greater impetus because of the fact that they see the necessity of preparing for the work. As I said at the beginning there is need of a practical and scientific knowledge, and they are acquiring this in order that they may be able to meet the problems and master them successfully.

Professor White, of the Floricultural department at Amherst says, "We are receiving calls for more men than we can supply and none of our graduates are waiting for positions." Then we have the forestry schools that are connected with the colleges and they are doing a great work in preparing young men and giving them knowledge about the growing of young trees, how to plant them and also how to treat the existing trees, how to do the forest work constructively, rather than destructively.

The Secretary of Agriculture at Washington, with his able corps of assistants is doing a great deal to develop the wealth of our country, and also our insular possessions. In regard to fruits, they are giving them careful attention that they may produce the maximum output of the highest quality with the minimum outlay. They are also endeavoring to improve the cereals so that we may have larger yields. The addition of a single kernel of wheat on the stock does not amount to much, but when multiplied by millions it makes a vast difference in the output of our agricultural resources, we see at once the necessity of giving careful attention to our agricultural products.

The insect pests have come in for great consideration. That is one of our greatest problems of the present time; the indifference which many show to these pests which have come to us from other lands have made this problem a very hard one for us to meet, and while they are by no means under control we are succeeding very favorably in holding them under sub-

jection. The United States Government has done much in importing various parasites for these insects in an endeavor to destroy them.

They have also done a great thing that is worthy of commendation, having cleaned the roadsides for a distance of one hundred feet on either side, covering a distance of three hundred miles (300) in length in sections that are badly infested and have made progress in cleaning the trees in that distance of these pests, and when we realize that they are scattered more by teams along the lines of travel than by any other method, we can at once see the wisdom of this undertaking. It is interesting to note, that while we have been the recipients of the different parasites from other countries there has also been a general reciprocity, and they have been in turn recipients. We have sent the beetle to Spain in return for parasites of scale insects, we have also exchanged exotic parasites with the Philippine Islands.

The forests receive great attention from the national government not only are they endeavoring to increase them, but also to preserve that which we have. To my mind the greatest work they are doing is along the line of fire protection, for fires in our national forests have been reduced to a minimum through the efforts of rangers to check them before they gain a headway.

Secretary Wilson of the National Department of Agriculture says he has found seven hundred (700) types of soil in our country, each having its own peculiarity, and the department is doing a great deal to determine the crops suitable for these different kinds of soil.

The value of our agricultural products for the past years amounted to eight billion nine hundred and twenty-six millions of dollars. This goes to show that agriculture is the backbone of our nation's prosperity, for no other source of income has any more influence, than that which comes from the soil; this we cannot be robbed of.

The press has given a great deal of attention to the work of horticulture, through its editorials. Literature is creating an interest in this work, for a greater knowledge to start with

will simply give thought and inspiration for success. At our next meeting we are to hear from the chairman of our library, on the importance of literature in the horticultural world.

Now turn to the business aspect or commercial side. It is a complex undertaking to figure out the cost of a crop of potatoes, a crop of apples, or a crop of onions. How are we to ascertain the profit or loss of the different crops, if we do not know what they cost us? I recently had a conference with one of the officials of a local carpet mill, asking him his method of getting the cost of their products, and he replied that they have every account so figured that they can tell you what the cost of the smallest item that enters into each yard of carpet is. They also keep a correct account of the different departments to note the progress that is being made and whether this or that material which enters into the product increases or decreases the cost in order that they may profit there by.

This method is done in the different departments of our state work. The Mass. Highway Commission knows the cost of maintaining every foot of state road, the care of each tree in the different towns and the different items that enter into all these results. And now it seems to me that this is just as necessary for the cultivators of the soil to know, as it is for the corporations. We can tell specifically whether the charges are just charges or not, and it is the only way to know whether we are going ahead or going back.

It is interesting to note that chances for acquiring land in our New England states is far better than in the west. The western land value is increasing and our New England land is growing less. It is better here than there, for the great transportation problems are solved, together with the fact that our products are as good, if not of better quality. There is no logical reason why New England land should not pay. It seems that we should pay more attention to the leaks than the profits. I think we might render a version of, "Take care of the pennies and the dollars will take care of themselves," to, "Take care of the leaks, and the profits will take care of themselves." These little leaks should be taken care of in our line

of work, just as is done in the big corporations, for I think greater success will be accomplished if the horticulturists do their work on a more business-like basis.

One of the great profits which the western people have that I think is productive of great profit, is the getting together of the producer and the consumer in the co-operative plan. Take the Hood River section, where all the products that are sent out are carefully packed by persons who are impartial and when they are ready for shipment each apple or orange is of uniform size in the same box and all are of the same quality so that when the purchaser gets them, he is assured of uniform quality and size. The horticulturist has a great number of varities of plants to select from in addition to the many new varities having their origin in this country. Explorers like Mr. E. H. Wilson, sent out by the Arnold Arboretum, have brought to us from other lands hundreds of varieties with the expectation that they will prove valuable here.

The New England corn show at Worcester and the apple show at the Worcester East Fair at Clinton were each indicative of the splendid results that can be accomplished by our growers. Exhibitions like these are a great educator and show marked progress in our work.

The present day horticulturist has many troubles to meet that his predecessors did not have, but he has a greater opportunity to show his skill and a corresponding greater field for his labors, he also has an appreciative purchasing public who demand the best and who expect to pay accordingly.

In conclusion, to be practical we must be scientific, to be scientific we must be practical; to be successful we must be business-like. We must have faith in New England, faith in Massachusetts, faith in Worcester County and think not of the good old times, but think of the good new times.

PRESIDENT E. W. BREED.

FRUIT GROWING IN THE WEST

By J. Lewis Ellsworth, Secretary Mass. State Board of Agriculture.

In discussing this subject I want to give my impressions of fruit growing in the Northwest—Washington and Oregon—to discuss our eastern fruit somewhat and, if time permits, to say something in regard to the New England Fruit Show and what it did for the fruit grower in New England. A year ago I went to the Pacific Northwest with the Worcester Board of Trade. My own particular mission was to represent the State at the Annual Meeting of the American Association of Farmers' Institute Workers, at Portland, Oregon. We had a most pleasant trip, one that I am sure all those who took it will long remember. While in those States I made several side trips to the leading fruit growing districts and a somewhat careful investigation into their methods of culture, packing and selling.

The first stop that I made in the fruit growing region was at Wenatchee, Washington. This district is a great advertiser, flooding the East with booklets, maps, and colored leaflets, all setting forth the praises of the district as a fruit growing center. On leaving the train the first thing you will notice will be a great electric apple hung across the street. The first resident had been there less than twelve years, but they had churches, public buildings, business blocks, and everything that goes to make up a thriving young city. One of the early residents took me out to see his apple orchard of ten acres. He came from St. Louis and called himself an Eastern man, and I suppose that if he had come from Colorado he would have been a Southern man. He had a very fine orchard and had just completed one of his numerous sprayings. I asked him if they had any insects and he replied in the negative. He said that they sprayed the trees because it made them grow better, but

on examining some suspicious looking leaves I found a codling moth nestling between them. They may not have as many insects as we have, but there are plenty of them out there nevertheless. They spray three, four or five times a year and are very careful about doing it thoroughly.

This orchard was in irrigated land and all those in that section were irrigated from a lake, each owner buying the water that they need from the reservoir people when they buy the land. They irrigate three times a year, saturating the soil throughly and then cultivating immediately, and continuing to cultivate at frequent intervals. This cultivation is to retain the moisture, by forming a soil mulch, and they call it "horse-leg" irrigation.

Their trees are headed at about eighteen inches from the ground and a short ladder will reach the tops of them. This makes it much easier, both for spraying and for gathering the fruit. This orchard, I was informed, was worth three thousand dollars an acre, or thirty thousand dollars, and the owner claimed that he would not sell at that price.

From Portland I went out to the famous Hood River district, about one hundred miles from the city. We went through the apple growing district in an automobile, and looked over several orchards carefully. Everywhere we went a cloud of dust followed the auto and any one behind us must have found difficulty in seeing his way for a few moments. The leaves on the trees were loaded with dust which looked like rust, and the fruit was so covered with it, that you could not tell the color of an apple until you rubbed the dust off.

We called at the first orchard in the Hood River Valley, which was set out by a Mr. Shepherd, and from which he has made a comfortable fortune. Why is it that these men make such a success? In the first place they are bright Eastern men and New England men, and they had the advantage of being on the ground first and skimming the cream off the opportunity. They bought the land cheaply, for five, ten and fifteen dollars per acre, set out their trees, irrigated them and gave them every care, knowing that they must produce first-class fruit if they

were to sell it in the eastern market. Even then they did not make much in the beginning, when every man was picking, packing and selling his own little crop. They saw that if they were to succeed in spite of the disadvantages they met with in the way of distance from market and heavy freight rates they must do so by co-operation, and they formed an association, the Hood River Association, that now has 80 per cent. of the apple growers belonging to it. They built a packing house that cost them forty thousand dollars, and sent their apples there to be packed by an expert, who did not know one man from another, nor whose apples he was packing at any particular time. They are packed in boxes, the same number of apples of the same size in each box. They are graded from eighty-four to two hundred and sixty-four apples to the box. When the association first took up the matter of packing, the apples did not run even and many of those brought in were not good. The expert, disinterested packer soon regulated that, for the growers found that it was no use to bring inferior fruit to the packing house, it was graded down so that it might as well be left at home. They sell their best apples and claim that they have very few poor ones, but I found that they had a canning factory and that it was possible to buy Hood River cider, so I concluded that there must be some fruit that was not first class. They adopt the wise course and utilize it in these ways on the ground, instead of sending it east to break the market for their best fruit and cause the buyers to lose confidence in it.

This is the bright side of apple raising in the Northwest and there is no doubt that those who were first on the ground have made and are making money, but there is another side to life in that country. You are away from neighbors, the houses are rude and not very expensive, life there is very different from life in our New England communities. I met a man who had just sold his orchard, ten years old, for eleven thousand dollars, and he said that he had a pretty good house on it, it cost him four hundred dollars to build. That will give you an idea of what their buildings are, although lumber is of course much cheaper that it is with us. Raw land in the apple section now

costs from one hundred to two hundred and fifty dollars an acre, so that you see that it takes more capital to make a start there than it did originally. Another thing against trying to start in apple growing in that country at this time is that it is a grave question if their market will be as good as it is now when your orchard comes into bearing. Eastern fruit, particularly New England fruit, is rather taking the lead away from them in the matter of price. This winter these Western apples have grown rather slowly in our eastern markets, at prices not giving too great a margin for profit, while the dealers could not get enough No. 1 New England Baldwins, at from $5 to $6.50 a barrel.

Right here in Massachusetts and in Worcester County we have as fine opportunities in orcharding as these western people have. Probably our land is not in itself as valuable as theirs, for that is a new country, and they have a deep soil, still rich in vegetable matter, but certainly at the prices which land can be bought here we can equal them or more, even if we are obliged to apply more fertilizer than are they. The market is right here at our door, without the thousands of miles of freight haul and as I have just pointed out our New England apples are the ones that are now being the most sought for. The dealers formerly cried down New England fruit and recommended western apples, but the public is too well posted in regard to comparative quality for them to do that now, and to-day it is the first class New England fruit that they are pushing and finding the best profit in handling. Here in Worcester County we have a great apple growing country, Worcester and Franklin counties being the leading counties for apple raising in Massachusetts. Then this is a good country to live in, we are near schools, churches, markets, trolleys and good roads, and our social conditions are better and life is pleasanter in every way than in the Northwest.

Here and there all over the State could be found those who were handling their apple crop on scientific lines, and who were reaping the just reward of their industry and intelligence. On the other hand the greater part of the apples produced in Massa-

chusetts were still handled along the old lines, with the result that the great bulk of our apples were put upon the market in a condition to absolutely repel purchasers—undersized, of poor color and shape, worm eaten, bruised and otherwise inferior.

With this condition the apple growers of Oregon and Colorado had an easy task in gathering the cream of the New England trade and in driving even our best producers to accept low prices for their goods.

To the gentlemen who organized the New England Fruit Show this situation was most distasteful. They felt that such an exposition would be of immense value in bringing really good home grown fruit to the attention of the consuming public. Those who attended that Show last October certainly went away with the firm conviction that the West had nothing that could compare with what was shown in the halls of the Massachusetts Horticultural Society. The first prize barrel of Baldwins exhibited at the Show were sold to a Boston dealer for six dollars. He in turn sold them to a Boston consumer for ten dollars, and the purchaser has been to him this fall asking for another barrel of the same quality at the same price. This instance shows the effect of the Fruit Show on one man who attended it. It made him a firm admirer of New England grown fruit and willing to pay any price to secure the best in the market. That it had a similar effect on the great consuming public is without question. The prices paid for apples in our Massachusetts orchards this year show that New England fruit is at last coming into its own with New England consumers, and a large part of this change of sentiment may properly be credited to the New England Fruit Show and what the public learned there.

The second great effect of the Show on Massachusetts was to improve the quality of the crop as a whole. The farmers and others owning orchards who attended that exhibition had a splendid demonstration of what intelligent care would do in improving and developing the apple crop. The great banks of splendid fruit, the barrels and boxes shown for prizes, the individual plates of carefully selected specimens, all had their

effect, but the object lessons of the effect of fertilizing and spraying, shown by sample exhibits from treated and untreated trees, must have been even more striking. Then there was about the exhibitors and the apple men present, the up-to-date apple men, an air of prosperity that was itself a testimonial to the business, and the constant repetition of prices received and offered for the best of the fruit had its additional effect upon those who came to learn and sent them away to practice. As a result there have been more farmers who have pruned and sprayed their apple trees this year than ever before. In our crop report for September we said "More spraying has been done this year than ever before, with the result that the crop is generally more valuable, as a whole, than many of the larger crops secured in previous years." This conclusion has been fully sustained by the reports which have come to me since it was written, and by what I have seen in my visits to the apple producing sections of the State.

This interest in spraying and in the general care of apple trees has been well repaid, sufficiently so that those who have followed the practice this year will do even more spraying another year, and their neighbors will have seen what it means and will also take it up. That this means great things for the apple crop of Massachusetts admits of no doubt.

A few concrete examples of what care and spraying have done will not be amiss. In October I visited the farms of a Boston man, located in the town of Hopkinton. These farms showed every evidence of neglect prior to their purchase by their present owner, but on them were several hundred apple trees from twenty to thirty years old. These had been neglected and had never borne a creditable crop of fruit. Taking them in hand, he procured expert advice and assistance, and began a course of fertilizing, pruning and spraying, which resulted this year in a crop of splendid fruit. Part of the crop has been marketed and it is estimated that he will secure at least 1,000 bushels. Prices so far received have averaged approximately four dollars per barrel, and with equal prices for the crop remaining unsold he will take in a gross amount which cannot be

far below the original cost of the property in question. Young orchards are in the process of being set out and it is his evident intention to make apple growing the principal feature of his venture into agriculture.

I am informed that a farmer in South Amherst secured twenty barrels of apples from two Mackintosh Red trees, twenty years old, which he sold at four dollars per barrel. If he had an acre of such trees, fifty trees to the acre, his gross income from it would have been $2,000 or ten per cent. of $20,000, which, according to the Oregon method of selling, would have warranted his asking that sum for the acre. In the language of the late lamented Colonel Sellers, "There's millions in it."

One interesting effect of the New England Fruit Show was that it inspired the article which most of you have seen in the October magazine number of the Outlook, on "Golden New England." The author tells me that he was first awakened to the possibilities of New England agriculture by a visit to the Show, and that this article, with its special emphasis upon apple growing, was a direct result of that visit. I am firmly convinced that he has not overstated his case and that we shall see many inquiries and purchases of New England farm property, in fact a genuine boom in such property in the next few years.

A development of the apple business in the last few years worthy of note is the interest taken in it by business and professional men. The example previously referred to is of one such. In addition Governor Eben S. Draper and Col. John E. Thayer, of Lancaster, have both been attracted to the possibilities of apple growing in Massachusetts and have gone into the business extensively and scientifically, both with old and young orchards, practising the most approved methods and producing fruit of the very first quality.

What does this awakening mean? It means that at last New England is coming into her own, that the day of ruinous competition with the western fruit is passing, that within the next generation we are to have the Western growers fighting,

not to monopolize the cream of our local markets, but to hold their own in the markets of the middle West. We have every advantage of location, cheap lands and nearby markets, and in addition, we have the great determining factor of superior flavor and quality. For the past few years I have had as a neighbor a gentleman from Philadelphia, whom I have supplied with apples. My fruit has never been anything except good farm-grown New England fruit. This year he has returned to Philadelphia, but he has ordered his winter's supply of apples, without stipulation as to price, being willing to pay the top market price plus the freight charges to Philadelphia, rather than to depend upon the local fruit. He has tasted the New England apple, he knows that there is nothing like it in the markets of the world, having the means to gratify his tastes he will have no other, without regard to expense. There are thousands like him throughout these United States, if we can but reach them and show them what we have in quality and flavor. I am told by a Boston dealer that he yearly ships New England Baldwins to California to a customer who will be satisfied with no other apple. These being the undisputed facts who shall say that we are not to possess the markets of the world if we will but live up to our opportunities, raise good fruit, spray, prune and cultivate, pack it attractively and market it with skill and intelligence.

USING ONE'S EYES

MR. PRESIDENT, MEMBERS OF THIS ASSOCIATION:

It is certainly a great pleasure for me to be here this afternoon in spite of the weather. I am going to take as my subject, "Using One's Eyes." As I look at this audience and think of my subject, I am reminded of the story of Colonel Clipsham's calendar.

You remember this society man, who was much in demand to speak on various occasions, and one day his little niece Gertrude happened into his study and began to play. In the course of her play she went to his desk and on that desk there was a calendar. There were two columns, one for the day of the week, and the other for the day of the month, and under the day of the week column, a space where one might record his engagements. During her play she turned the screw of the day of the week scroll, and as a result his engagements were mixed for the coming seven days.

Thus he went to speak to the carriage builders association, and thought he was addressing the Chautauquan literary circle. He praised his audience on account of their interest in books, but did not say anything about varnish nor about the hub of the universe, nor did he once mention Dr. Holmes's One-Hoss Shay, which had been worked to death at their celebrations. The result was, they received him with great applause.

The next night he went to speak to the local Grand Army Post. He had nothing to say about Molly Stark, nor about the Bird of Freedom, for he imagined that he was talking to the graduates of the Western Reserve College, and complimented them on their broad scholarship and intellectual ideals. The Grand Army was very glad to greet him, and received him with much enthusiasm.

The next night he strolled into a political meeting, a caucus of the party to which he did not belong, and denounced the rogues and rascals face to face. And when the members of his party read his speech, in the next morning's paper, they nominated him for Governor of the State. And he was elected Chief Executive of that Commonwealth.

Well, I do not come to you, with my present theme, because of any blunder on my own part. Intentionally, I choose a topic of general interest. I am going to talk to you on the subject of "Using One's Eyes". Isaiah, in one of his most interesting passages, says, "There are people who are asleep, not from the slumber that comes from wine, but from the sleep that comes from indolence."

I

The first thing I want to say, this afternoon, is that we are most of us exceedingly blind. Now, I want to ask you if there is anything that we consult more frequently, morning, noon and night, than we do our watch? Yet if I should ask this company to draw a diagram of that watch on paper, with the numerals correctly represented, I am very sure that only a small percentage of the people gathered here would get one hundred per cent. in such an examination.

I have tried this experiment on a great many persons and have only found one individual who could do it correctly. Most people will tell you that for four o'clock there are the Roman numerals IV, but if you will look at your watch, you will find that there are four straight lines instead. They will tell you that six o'clock is represented by VI, whereas a single dot is printed underneath the second hand.

I know of a man living in the Southern part of the city of Worcester, and in order to increase his power of vision, he has made it a practice for several years, as he came up Main street, to notice the various business signs along his route, and now at the present time he can tell nearly every man engaged in trade on this thoroughfare.

A young man with whom I am acquainted came to Worcester as a stranger and partly because he was homesick, and

in part for the reason that he desired to increase his powers of observation, this young man made it a matter of daily practice to try and remember as many faces as possible of the people he passed on the street going to and fro from his work. And from experiments lasting two weeks, he has been able to place fifty-four different individuals in mind. I wonder if many of us, in this assembly, could pass such an examination as that with good results?

If after this meeting we were to go to Barnard and Sumner's, or if we should go to the Boston Store or to some other place of business, it is quite likely that to-morrow one of our best friends would say that he saw us with this or that person and that we were looking directly into his eyes and yet we saw him not.

You have heard, perhaps, of the game sometimes played by children in front of a store? They will stand looking into a window and some older person will say to them, "Look into this window for five or ten seconds and then write down the different objects you have seen. Only one or two will give a fairly accurate account of the things on display.

You have heard no doubt of the Hindu father who said to his boy, "Go and pick a fruit from yonder tree and bring it here." He then said, "Take a knife and cut the fruit in two and tell me what you see." The boy answered, "I see a number of small seeds." Then the father replied, "I want you to cut one of the seeds in half and tell me what you see." The boy answered, "I see nothing." The father said, "Where you see nothing, there is a great tree." I have been trying to illustrate the fact that we are, many of us, extremely blind.

II

And in the next, and second place, let me say that it is the people who use their eyes who accomplish most.

I wonder if you know how khaki was invented and how it came about that soldiers in England and America, and travellers throughout the world, are wearing khaki uniforms, instead of uniforms made of some other material? Well, several years

ago a certain business man in Manchester, England, was travelling for his firm in India. He was introduced to an officer of the British Army and during the conversation, this soldier friend remarked that the one who invented a uniform that would retain its color, when washed in soap and water and soda, would make a fortune. This traveller, on his return tried a number of experiments with a distinguished chemist, lasting many weeks and months. Finally, when they had been using twelve different kinds of cloth and had put them through the same chemical test, it was discovered that one piece of cloth retained its color and the other pieces did not. Both the man of business and the chemist were appalled at that, and finally the man of business used his eyes and saw that that particular piece of cloth had been dyed in a special metal dish, and it was the combination of the metals and chemicals that brought about the desired result. And so this business man made his fortune.

Now turn to the enterprise of paper manufacture and we discover exactly the same lesson. Some years ago it looked as if there would be a famine, all over the world, of the things of which paper was made. Cotton and rags were becoming scarce.

Finally, one day, Mr. Hill, an American scientist, happened to notice, for the first time, in careful observation, a hornet's nest. He said to himself, if a hornet can manufacture a wonderful house out of paper, is not there a lesson here for man? The result was, he went to a noted paper manufacturer and he carried with him his hornet's nest, which he held up in front of the man who manufactured paper and he said "These hornets chewed little pieces of wood to make paper, and why can we not make paper from wood-pulp? The result is, that the world's greatest paper mills make their paper from wood-pulp and it came about simply because that scientist, Dr. Hill, used his eyes!

Perhaps you went to a wedding last night, perhaps some of you are going to a wedding next week, I am very sure some of you are going to attend that kind of a gathering next June.

The chances are that before the ceremony is over you will discover that paper confetti has come to take the place of rice, and it is a very fortunate thing, for many people have been made blind and some deaf from the promiscuous throwing of rice. Let us go back several years and look into the window of a great printing establishment in France, the place where almanacs are issued by the thousand. It is noon, and no work is being done. A young man, full of mischief, stoops down and picks up a handful of tiny disks of paper and throws them at a young girl who laughs and tosses them back again. Just then the manager enters, he has an eye for fun, but also has an eye for business. These disks have been cut from the left hand corners of almanacs, in order that a cord may be run through them so that they may be hung up in the kitchen or in some other place.

The result is tons of these little disks of paper are now manufactured on purpose and shipped to every civilized country in the world.

Not long ago, when Dr. Richard Cabot was addressing a meeting in the Woman's Club house of this city he said that one day while he was at work in the Mass. General Hospital, at Boston, a series of events happened which opened his eyes. A woman came to him and he diagnosed her case and saw she was suffering from diabetes. He at once handed her a slip of paper with the proper diet; the woman looked at it and saw she was obliged to have such luxuries as peaches, nuts and different varieties of bread which cost several times what the ordinary varieties of bread cost, and the woman said, "If I must have that kind of food or perish, then the time has come for me to die, for I have no money with which to purchase these things." Dr. Cabot said, "I felt like a fool." Then there came another woman who was suffering from tuberculosis. He told her she must live on high ground where she must have pure air and sunshine and extra meals and good wholesome food. The woman threw the printed slip on the floor and again Dr. Cabot felt like a fool.

The result was that this well known physician organized, for the first time in this country, a committee of social service to help these poor people and this committee reaches the notice of wealthy and influential people as well as the thousand charities of the city. I understand that right here in one of the hospitals of Worcester a committee is being organized and so we find that in every walk of life the people are beginning to use their eyes.

In Westboro, there is a clergyman who was once a preacher, and has now become a farmer of a very excellent type. Recently I visited his farm and I saw there many different kinds of corn which he has been raising, and he is now producing a kind of potato which has a minimum amount of starch and is therefore very good for medical purposes. On one acre he has raised a vast number of water melons, and knows all there is to know in regard to the different varieties of soil. That shows what good opportunities there are here in Worcester County, not only to raise fruit, but also to make money.

III

The man who uses his eyes is the man who wins success. Now, after speaking for a time, and trying to illustrate the fact that most of us are exceedingly blind, and also having pointed out the fact that people who make use of their organs of vision are the people who win success in every department of human endeavor, I want now, in the next and last place, to call attention to the truth that we can see things not only in their present shape but can discover that everything is a sign or symbol of something else. For example, a daily paper would be to a savage chief but so much material with which to kindle a fire, or wrap things up in. To us it is a symbol of what is going on in London, New York or Boston.

Now, supposing I were to hold a piece of coal in my hand, I might pinch that coal until the black came off on my fingers, I might pinch it until it made my fingers sore. It would seem as though I had laid hold of reality. Yet you know and I know that if I were to put that piece of coal into the grate, it

would become smoke and flame and very soon it would be converted into invisible gases.

Yet the scientists tell us that not one particle of this matter can be really destroyed. Take a burning candle, snuff it out, and very soon the gas has enveloped the entire room. The candle has changed its shape and form, but scientists know no such thing as annihilation. Come up to the realm of humanity, and how is it?

One day a young man came to my house and pulled the door bell. I had not seen him for many years, and if I had stopped to think about the matter, at that moment, I might have remembered that I had never seen that young man in his present shape. For the physiologist says that every seven years a man wears away his body. The latest figures reduce it to about one year. And I understand that the heart is entirely worn out every sixty days, and so the young man, as I looked upon him several years ago, was not the young man I gazed upon, when he pulled my door bell. It is the part of a man which the scientist has never seen or weighed which endures longest even in this present life.

You remember when Emerson bought his farm, he said, "I had no realization what a bargain I had made; I realized that I had purchased certain buildings and farm utensils but I did not know what a sunset or sunrise I had purchased every day; I did not remember that I had a host of stars over my head. That land was not only good for its apparent cash value, but that it had a high and more ethereal excellence." And now I am going to close my talk of this afternoon with just one other illustration: Many years ago the noted poet Goethe was entertained at a county villa at Stratsburg with several other people, and on the morning after their arrival they looked out of the window and saw a great cathedral across the way, and one man said,"What a great pity it is that that grand cathedral has never been completed, I can see only one tower and there ought to be several towers." Instantly the poet Goethe answered, "Yes and it is an equal shame that the single tower has never reached the fulfillment of its design." At that moment

a young man who was in the assembly spoke up and said, "You have been saying that where the four parts of the single tower are, there should be added four slender spirals, and in the place where the clumsy wooden cross now stands, there ought to be a tower grander and more beautiful than all the rest. In the public archives is a plan calling for all these things. Who told you of this?" Goethe answered, "Nobody, I have fallen in love with the tower and have been communing with it, and it told to me its secret."

I like to think that the seers and prophets of the olden days, with Jesus of Nazareth at their head, have looked beyond the things which are seen and temporal to those things which are unseen and eternal. That they, or He, at any rate, has looked above the falling bird and the growing lily to Him who feeds and clothes all his creatures. That they have looked at nature and at human nature, at the great facts of life and of death and have dared to write above and underneath and through them all the mighty, the inspiring words of God and Immortality!

Rev. Samuel C. Beane, Jr.

OTHER MEETINGS DURING WINTER

Thursday, Feb. 9th. Ladies' Day. Horticulture a Profession for Women, by Miss Laura Blanchard Dawson, Jamaica Plain.

Mrs. Edward W. Breed in charge.

Saturday, Feb. 11th. Children's Day. Entertainment by our Young Exhibitors. Mrs. Percy G. Forbes and Mrs. Harry R. Hildreth in charge.

Thursday, Feb. 16th. Lecture on Horticultural Travels, by Prof. F. A. Waugh, Amherst, Mass. Judge F. H. Chamberlain in charge.

Feb. 23, 1911. How Birds and Animals learn with Application to the Extermination of the Undesirable, by James P. Porter, Dean of Clark College.

WEDNESDAY AND THURSDAY, Mar. 8th and 9th, Massachusetts Fruit Growers Convention.

THURSDAY, Mar. 9th. Subject. Clouds, by Gen. Charles W. Wood.

Dec. 12. First meeting of the Committee on Arrangement, H. R. Kinney, Chairman.